

# 2018 ANNUAL REPORT

Clearwater UWCD  
Belton, Texas  
[www.cuwcd.org](http://www.cuwcd.org)



*Every drop counts!*

Photo courtesy of Tamir Kalifa



## *District Mission Statement*

*Develop and Implement an efficient, economical and environmentally sound groundwater management program to protect and enhance the water resources of the District.*

# Clearwater Underground Water Conservation District

## Annual Report - Fiscal Year 2018

*The Annual Report for Fiscal Year 2018 (FY18) is presented to the Directors of the Clearwater Underground Water Conservation District (CUWCD or District) by May of the following Fiscal Year (May 2019). This report summarizes the activities and accomplishments of the District during FY18 focusing on administrative tasks, management plan requirements, and miscellaneous activities. Most activities are based on the District's fiscal year; however, information dealing with well registration, permitting, and production are based on the 2018 calendar year.*

### **2017-2018 Board of Directors**



**David Cole**  
At-Large

**Wallace Biskup**  
Precinct 3

**Leland Gersbach**  
Precinct 1

**Judy Parker**  
Precinct 4

**Gary Young**  
Precinct 2

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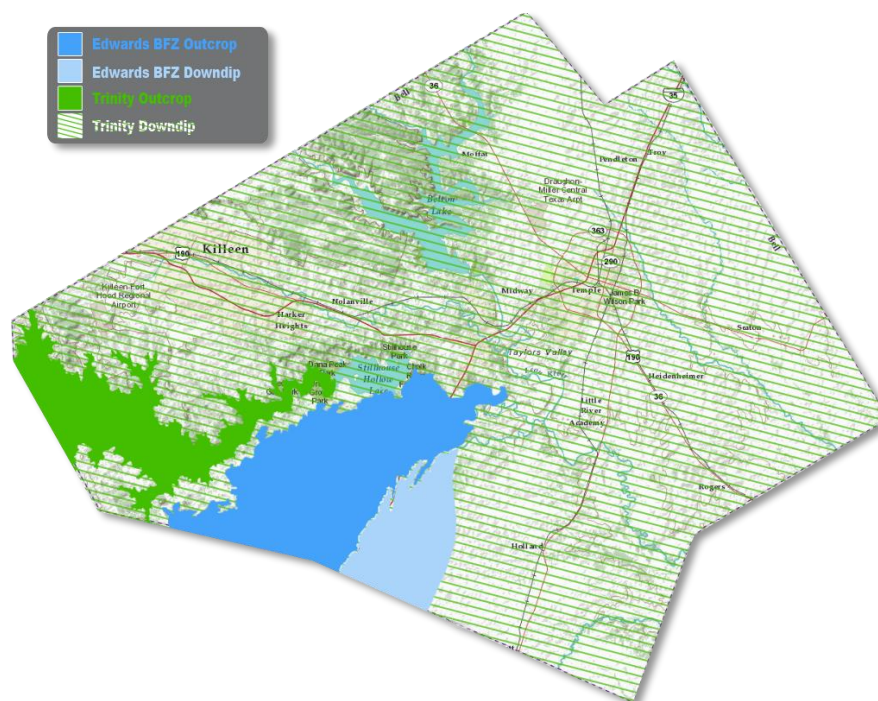
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# 1. Introduction

The Clearwater Underground Water Conservation District was created by the State legislature in 1989 to manage the groundwater resources of Bell County. The District was approved by the voters of Bell County in August 1999 and opened its doors for business in February 2002. Clearwater's fiscal year runs from October 1st through September 30th. This report summarizes the accomplishments and activities of the District during FY18; but reflects registration, permitting, and production figures for the calendar year 2018.

The District manages the groundwater resources from two major aquifers: The Trinity and The Edwards (BFZ) in Bell County, TX. The Trinity aquifer underlies all of Bell County and is below the Edwards (BFZ), while the Edwards (BFZ) is located in just the southern part of the county.



The Trinity aquifer is comprised of three water bearing layers within the boundaries of Bell County. These layers are the Upper Trinity (Glen Rose), Middle Trinity (Hensell), and Lower Trinity (Hosston). Other water bearing formations in Bell County are Alluvium, Austin Chalk, Buda, Edwards Equivalent, Kemp, Lake Waco, Ozan, and Pecan Gap.

# 2. Administrative Tasks

Administrative tasks include internal administrative activities necessary for a groundwater district to function effectively. Management Plan requirements include the required tasks and activities identified in the District's Management Plan. Miscellaneous activities include other activities and programs that have been an integral part of the District but are not required by the Management Plan.

## A. Contracts / Agreements

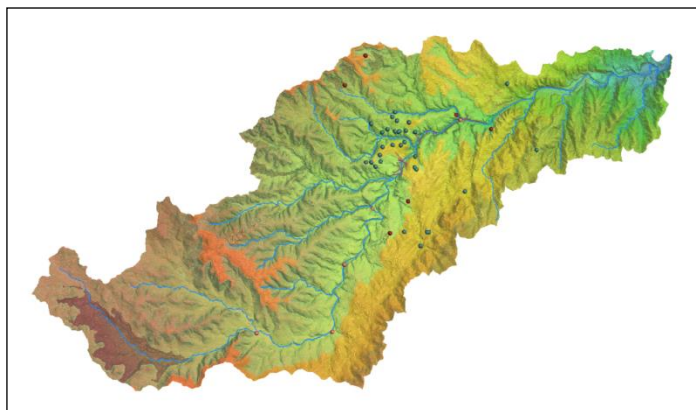
### 1. Technical Consulting Services

#### **LBG-Guyton Associates / WSP, USA**

Clearwater UWCD has continued with a professional services contract for general consulting with LBG-Guyton Associates that began in calendar year 2014 and included fiscal years FY14, FY15, FY16, FY17 and FY18. In January of 2018, LBG-Guyton was sold to WSP, USA. WSP, USA provides administrative and technical reviews of drilling and operating permits along with investigative analysis of aquifer conditions and well construction complaints. WSP, USA also continues to provide technical representation of the district in GMA 8 relating to development of desired future conditions associated with required joint planning.

#### **Allan R. Standen, LLC**

Clearwater UWCD maintains a professional services contract with Allan R. Standen LLC for general consulting services and the annual update of our 3D model. The 2018 updates included the addition of new geophysical and well drilling logs from throughout the county to the 3D model. Updating our model on an annual basis allows for a more accurate analysis and use of this tool by district staff, consulting hydrogeologist, and landowners for well development and prognosis of the aquifer depths prior to drilling. The tool also continues to assist the district in source aquifer determination of newly drilled wells.



Salado Creek Watershed from Bell County 3D  
Groundwater Model

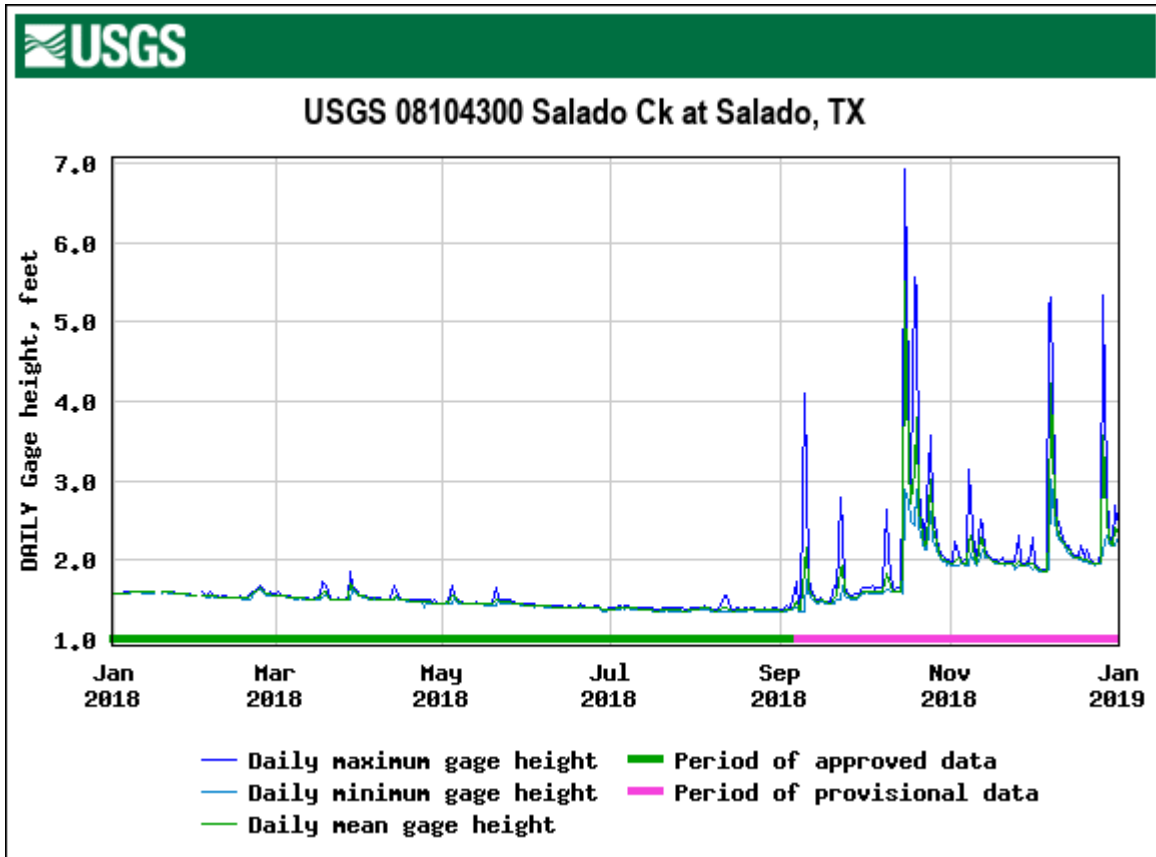
#### **Halff Associates, Inc**

Halff Associates, Inc. created and continues to manage the District's online GIS website. This GIS platform allows the District web based access to the entire database of wells that has been compiled through the years. All well information is available online to staff as well as the public. Some of the information available includes well latitude and longitude along with ground level elevation of the well head and total depth of well. In 2018, Halff Associates continued technical support and hosting of the District's online GIS website.

## U. S. Geological Survey, Texas Water Science Survey

During the spring of 2013 the U.S.G.S gauging system was installed and the process of analyzing the data and recalibrating the system began. Through the year of 2018 the system was continuously fine-tuned to ensure accuracy of the data collected. This gauging system and relationship with the USGS has proved to be an important step forward in monitoring spring flow both now and well into the future. The image below shows the 2018 stream flow data taken by the gauging system in Salado Creek. Also, in 2018, USGS collected a variety of geophysical logs/data as part of a toolbox approach at 4 wells in the District. Data received from these efforts allows for recalibration of the 3D model and virtual bore tool. The live data can be found online on our website:

<http://www.cuwcd.org/salado-springs/salado-creek-gauges/>



## Baylor University, Department of Geology

Clearwater UWCD continues to contract with the Department of Geology at Baylor University to conduct research projects. The overall goal for the proposed research is to gain a deeper understanding of the Northern Segment of the Edwards Aquifer. Specifically, knowledge of how much recharge occurs and the pathways that recharge takes to the aquifer will greatly assist groundwater resource management. An enhanced scientific understanding of the Northern Segment of the Edwards Aquifer will provide insight to CUWCD and community stakeholders, as well as support collaboration between the district and community in future decision-making processes that will be impacted by the Endangered Species Act.

The studies the District has funded can be found on our website: <http://www.cuwcd.org/aquifer-science/edwards-bfz-aquifer/>



## 2. Legal Services

The District requests legal consulting services on an as-needed basis and utilizes Lloyd Gosselink Rochelle & Townsend, P.C. (LGRT) for consultation. LGRT was the District's sole advisor during FY18 which included the following issues:

- Research and guidance on permitting issues, spacing issues, rule interpretation, public hearing notices, meeting cancellation notices, conservation easements and topics allowed for discussion in closed session.
- Representation of groundwater districts at Texas Water Conservation Association Groundwater Sub-Committee on Desired Future Conditions.
- Research and guidance on the listing of the Salado Salamander, the process for comments and support of CUWCD as they engaged as a stakeholder with the Bell County Adaptive Management Coalition.

## 3. Other Services

### Bell County Adaptive Management Coalition

The Board entered into an interlocal agreement beginning in fiscal year 2012 that continued into fiscal year 2018. CUWCD, the Bell County Commissioners Court, Village of Salado, Salado Water Supply Corporation, Temple Area Builders Association and Billie Hanks, Jr. have collectively contributed \$314,906.65 since 2012 to evaluate current science and to develop new science regarding the Edwards (BFZ) aquifer and the Salado Salamander habitat. Total expenditures for FY12 - FY18 are \$260,933.17 leaving a balance of \$9,401.57 to fund the FY19 studies. The District defends the position that regulating mechanisms are in place (by CUWCD) on spring flow to protect the specie.

### **Alton D. Thiele, P.C.**

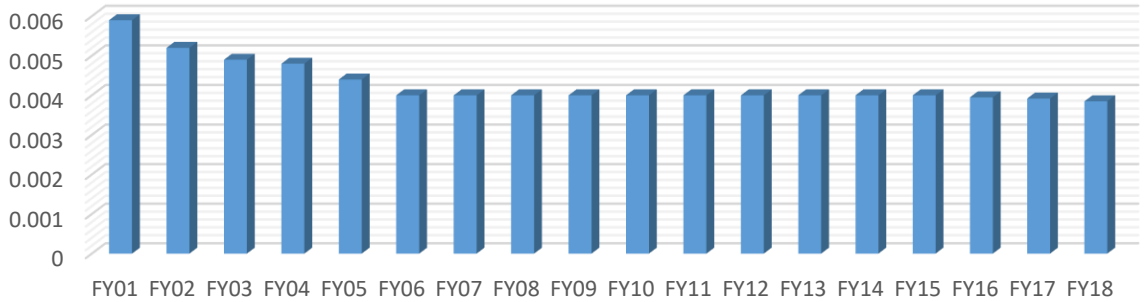
An annual audit of the District's finances is required by Chapter 36.153 of the Texas Water Code to determine the financial condition of the district. Alton D. Thiele, P.C., Certified Public Accountant located in Belton Texas provides the annual financial audit for the District. For more information, see section "B.2 Financial Audit" later in this report.

## B. Financial Items

### 1. Budget and Tax Rate

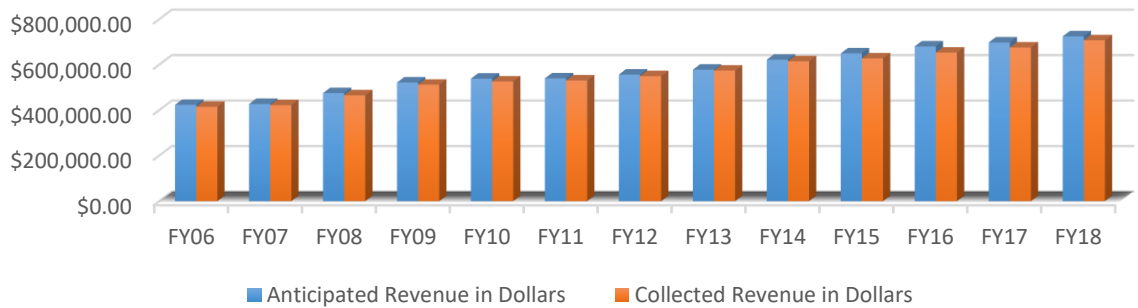
The adopted tax rate for FY18 was \$0.00385/\$100 valuation. The Board voted to lower the tax rate for the third consecutive year. Since the inception of the District, the Board has consistently lowered or kept the same tax rate since it began assessing taxes. Two workshops (June and July) were held in 2017 to develop an operating budget for the upcoming fiscal year (FY18) and to set the corresponding ad valorem tax rate. The Board voted to lower the tax rate for FY18 to \$0.00385/\$100 valuation.

### CUWCD Tax Rate



The Budget for FY18 was \$724,520.00, actual income collected was \$707,028.30 and ended with the adjusted income of \$711,028.30. The Board of Directors voted to amend the budget in FY18 to pay for a new generator for the education trailer, therefore, \$4,000.00 was moved from the reserve funds to capital improvements. The total expenditures for FY18 were \$617,024.37. The Board prescribed closing the year with \$94,003.93 being returned to the Reserve Fund.

### District Budget



The approved budget for FY18, along with the schedule of revenues and expenditures is attached as Appendix A.

Online: <http://www.cuwcd.org/public-records/cuwcd-budget/>

## 2. Financial Audit

An annual audit of the District’s finances is required by Chapter 36.153 of the Texas Water Code to determine the financial condition of the District. Alton D. Thiele, P.C., Certified Public Accountant located in Belton, Texas provided the 2018 annual financial audit for the District. The audit began immediately at the closing of FY18 on September 30, 2018 and they concluded their audit and submitted their findings to the District in February 2019.

See Appendix B for FY18 Financial Audit.

Online: <http://www.cuwcd.org/public-records/audits/>

## C. Miscellaneous Policies / Issues

### 1. District Rule Amendments

The Board amended the District Rules in March 2016 in accordance with Chapter 36 requiring public notice, a public hearing, and Board approval. The suggestions to the rule amendments were based on the legislative mandates from the seven bills that were passed by the Texas Legislature that affected Chapter 36 of the Texas Water Code, previous discussions, construction standards and water quality within the District.

*See our website for complete rules:* <http://www.cuwcd.org/regulatory-program/district-rules/>

### 2. Bylaws Revised

At the time the District Rules were amended, the rules that addressed the operations of the District were deleted and moved to the Bylaws. The Board of Directors approved the amendments to the Bylaws by resolution on April 13, 2016.

*See our website for complete Bylaws:* <http://www.cuwcd.org/district-overview/bylaws/>

## D. Board of Directors

### 1. District Officers

The Board of Directors, per District bylaws, elect officers annually at the first board meeting of the calendar year. The FY 2018 Officers are identified below, along with the office they held and precinct they represent. The map to the right is a map of the Bell County Commissioner Precincts which also serves as the precinct boundaries for the District.

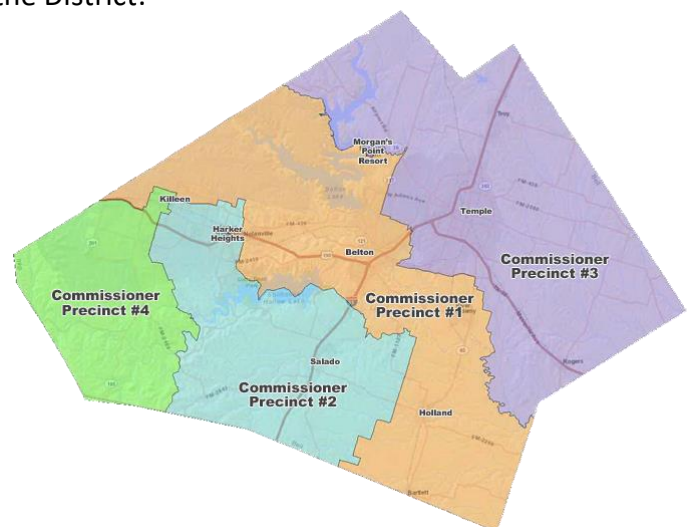
Leland Gersbach, President – Precinct 1

Wallace Biskup, Vice President – Precinct 3

Judy Parker, Secretary – Precinct 4

Gary Young, Director – Precinct 2

David Cole, Director – At Large



In September of 2018, Director Judy Parker resigned as the Precinct 4 Director. Scott Brooks was appointed as the new Precinct 4 Director on September 12, 2018.

## 2. Meetings - FY18 (Oct 2017-Sept 2018)

The Board of Directors held 13 Board meetings and 1 informational meeting in FY18. The Workshops and regular Board meeting agendas included discussion and presentations on the topics listed below.

- Presentations by USGS Water Science Group
- Presentations by Baylor University regarding current status of the Edwards (BFZ) Aquifer
- Legislative updates
- Conduct hearings on drilling and operating permits
- Salado Salamander issues as it pertains to CUWCD's governance of groundwater

All board meeting agendas, minutes, and financial reports can be viewed online by visiting <http://www.cuwcd.org/public-records/>

## 3. Public Advisory Committee

The Public Advisory Committee (PAC) has in the past, served as a liaison between the Clearwater Board and the residents of Bell County. The public advisory members would meet as needed and regularly attend the monthly Board meetings.

During FY18, the Board of Directors voted to dissolve the PAC. In FY19, the Board of Directors will be assembling a stakeholder group of 7-15 participants from multiple entities and interest. The stakeholder group will participate in DFC development, District rule amendments and other issues deemed necessary by the stakeholders.

## E. Management Plan

Texas Water Code, Chapter 36.1071--36.1073, states the District Management Plan must be reviewed and readopted every 5 years. The plan is then subject to approval by the Texas Water Development Board (TWDB). Clearwater's Management Plan was due to the TWDB by March 6, 2016. Proposed revisions for the 5-year update to the District Management Plan went through one preliminary review by the Texas Water Development Board (TWDB). The revised Management Plan was accepted on January 13, 2016 by the Board following the public hearing on the revised Management Plan. Afterwards, the Board adopted the revised plan. The Management Plan was sent to TWDB for approval prior to the due date, March 6, 2016. The District received approval from TWDB on February 19, 2016. The District Management Plan can be found on CUWCD's website at: <http://www.cuwcd.org/district-overview/management-plan/>

## 4. Management Plan Requirements

The District Management Plan identifies the goals and objectives of the District and provides performance standards and tracking methods to measure the District’s effectiveness in meeting these goals. The District goals are mandated by Texas Water Code Chapter 36, Section 36.1071. Although all groundwater conservation districts are subject to these goals, each district chooses how to best implement the goals within their district by establishing their own objectives and performance standards.

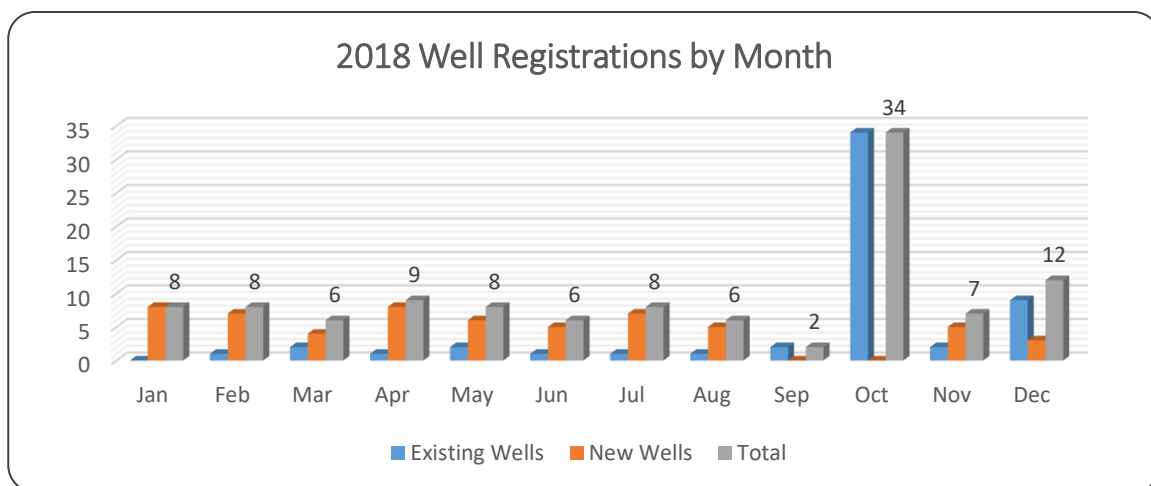
### A. Providing the Most Efficient Use of Groundwater

#### 1. Well Registrations

Objective: Each year, the District will require the registration of all wells within the District’s jurisdiction.

*Objective Satisfied*

During calendar year 2018, 114 wells were registered. The tables below summarize well registration and permitting activity from January 1, 2018 through December 31, 2018.



Appendix C for Master Registration Table

#### 2. Permitted Well Applications

Objective: Each year, the District will require permits for all non-exempt use of groundwater in the District as defined in the District rules, in accordance with adopted procedures.

*Objective Satisfied*

Of the 114 wells registered in 2018, only 5 of those were classified as non-exempt. The Table below summarizes the non-exempt wells or permits that were approved during 2018 and the corresponding permits that were issued where applicable.

**Non-Exempt Permitted Well Registrations for 2018 Calendar Year**

Well #	Land Owner	Ac-Ft / Year	Aquifer	Use	Permit Type
N1-18-001P	Joe Jackson	0.36	Middle Trinity	Domestic	Drilling & Operating
N1-18-002P	Windy Meadows	0.47	Edwards BFZ	Domestic	Operating
N1-18-003P	Amanda Myers	1.98	Middle Trinity	Domestic	Drilling & Operating
N1-18-004P	Justin Scott	0.22	Lower Trinity	Domestic	Drilling & Operating
N2-18-001P	Strasburger Farms	33.84	Alluvial	Ag/Irrigation	Operating

**3. Groundwater Database**

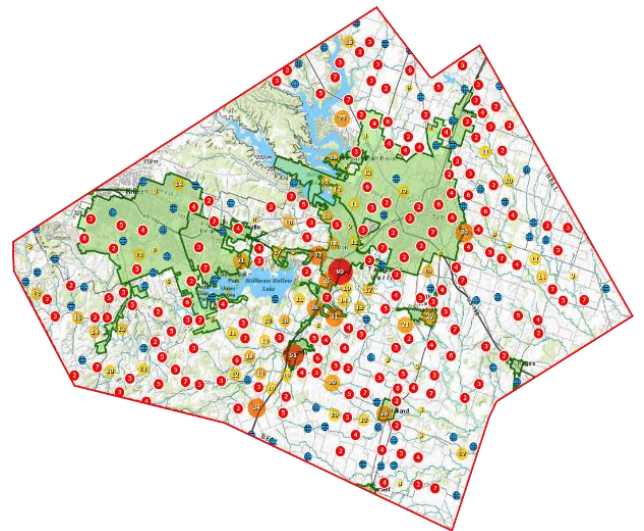
Objective: Each year, the District will maintain a groundwater database to include information relating to well location, production volume, and other pertinent information deemed necessary by the District to enable effective monitoring of groundwater in Bell County.

*Objective Satisfied*

**District GIS Database**

The District maintains an online GIS system and works closely with Halff Associates, Inc. to provide web-based access to our ever growing database of well information. Every well registered in the District is available in our database with latitude and longitude and also the elevation of the land surface at the well head. With the well information, the District has the ability to attach production and permit information along with other pertinent data. The public maps are available on the District website's homepage, or by going to the following web address and clicking on Public Access Maps:

<http://www.cuwcd.org/>



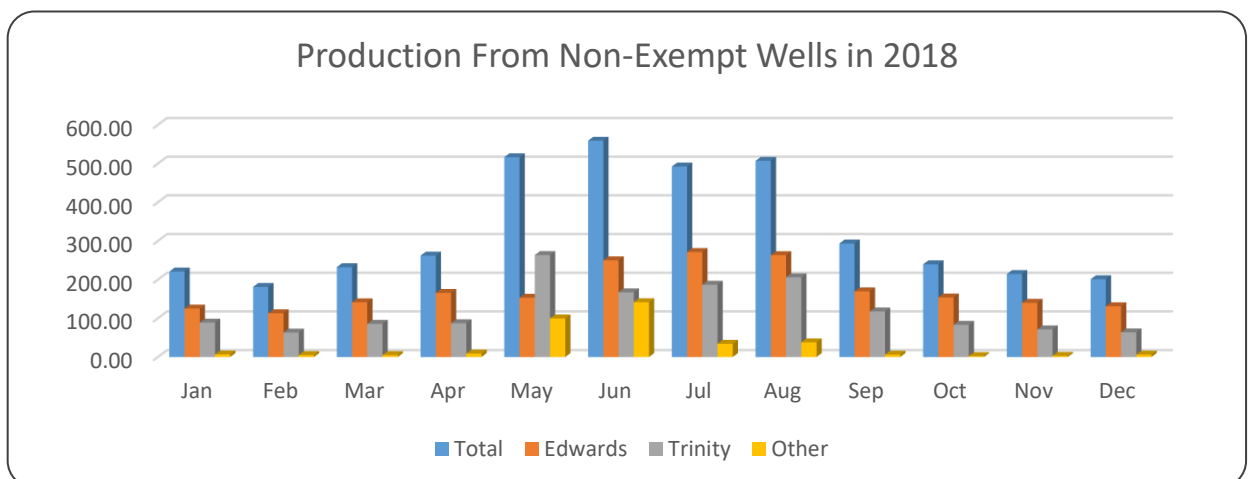
## Non-exempt Well Production

The District continued collecting data from non-exempt wells during 2018. Monthly production reports are required by the 5th day of the following month for all wells with operating permits. The tables below show the total permitted amount for the non-exempt wells and their total production. In 2018, actual water production figures were significantly lower than the amount permitted. Part of this is due to the issuance of Historic and Existing Use Permits (HEUP). The HEUPs are issued for the full permit amount, regardless of whether the permittee will be using this amount during the year.

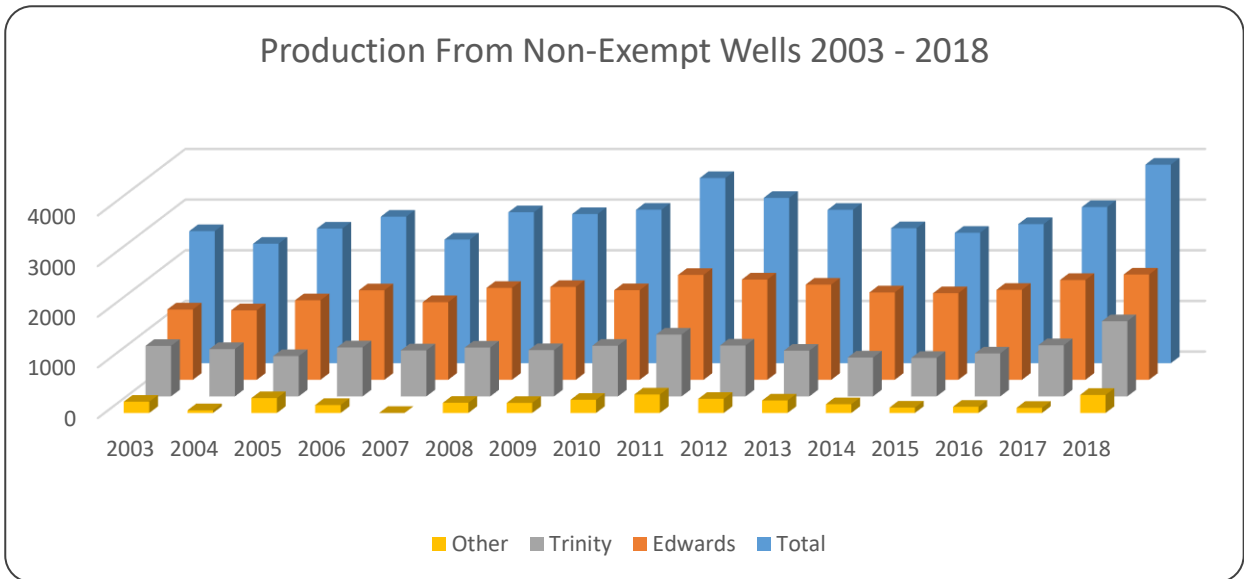
**2018 Permitted Wells**

	Permitted Ac-Ft	# Permitted Wells	Actual Use Ac-Ft	# Active Permitted Wells	% Usage
Edwards (BFZ)	2,509.35	55	2,077.87	45	82.79%
Trinity (total)	4,496.09	58	1,484.77	44	22.23%
Glen Rose	132.05	5	50.47	4	32.18%
Hensell	466.76	30	87.41	22	17.90%
Hosston	3,897.28	23	1,346.89	18	22.27%
Other Aquifers	578.50	21	356.96	16	17.68%
Total	7,584.41	134	3,919.6	105	40.39%

The following chart shows 2018 production by month and aquifer. Production was at its highest level during the month of June with a monthly withdrawal of 543.82 ac-ft. Throughout the year, withdrawals from the Edwards BFZ were consistently higher than from the Trinity aquifer. Production from other source formations was minimal throughout the year. Production from other source formations is higher during summer months which reflects agriculture irrigation necessary at that time of year.



In the following graph, production from 2018 (105 wells) is shown compared to production in years 2003 through 2017. Overall production in 2018 was 3,919.6 ac-ft which is slightly higher than the total production in 2017. The Edwards (BFZ) had a total production for 2018 of 2,077.87 ac-ft, total Trinity aquifer production was 1,484.77 ac-ft, and other formations produced 356.96 ac-ft of water.



See Appendix D for 2017 Well Production Report

### Groundwater Transport

During 2018, six entities in Bell County transported groundwater outside the District. A total transport of 33.59 ac-ft. occurred from the Edwards BFZ aquifer and 166.03 ac-ft. from the Trinity aquifer. The District is allowed by state law to charge a transport fee of \$0.025/1,000 gallons transported. This generated a total revenue of \$1626.14 for 2018.

Entity	Aquifer	County	Ac-Ft	Gallons	Fee
Bell-Milam-Falls WSC	Lower Trinity	Falls, Milam, Williamson	100.04	32,598,400	\$814.96
Central Texas WSC	Lower Trinity	Falls, Milam	61.26	19,960,468	\$499.01
East Bell WSC	Lower Trinity	Falls	1.08	351,942	\$8.80
Jarrell Schwertner WSC	Edwards (BFZ)	Williamson	33.59	10,944,120	\$273.60
Little Elm Valley WSC	Lower Trinity	Falls	2.38	774,622	\$19.37
O&B WSC	Lower Trinity	Falls	1.28	415,812	\$10.40
		TOTAL	199.62	43,740,433	\$1,626.14



## Water Loss in Public Water Systems

The District tracks water loss of all public water supply systems in Bell County that utilize groundwater. Real Losses, also referred to as physical losses, are actual losses of water from the system and consist of leakage from transmission and distribution mains, leakage and overflows from the water system's storage tanks and leakage from service connections up to and including the meter.



Water leaking from a supply line

### Bell County Water Loss 2012-2018

Entity	2018 Loss (% of water)	2017 Loss (% of water)	2016 Loss (% of water)	2015 Loss (% of water)	2014 Loss (% of water)	2013 Loss (% of water)
Armstrong WSC	18.00	11.12	15.74	15	13	N/R*
Bell Co. WCID #2	11.10	9.20	8.34	11	9	12.54
Bell Co. WCID #5	16.72	20.97	10.64	14	15	9.00
Bell-Milam-Falls WSC	36.60	29.03	32.06	26	34	26.45
Central Texas WSC	8.00	8.30	9.25	NA	NA	NA
City of Troy	34.75	17.20	9.94	N/R*	24.5	33.00
East Bell WSC	16.21	12.54	8.23	14.64	13.71	17.04
Jarrell-Schwertner WSC	48.04	49.33	50.72	56.45	54.25	48.72
Little Elm Valley WSC	23.04	22.16	25.30	33	27	23.75
Moffat WSC	26.70	19.68	10.43	16	6.37	4.16
Oenaville/Bellfalls WSC	7.39	8.99	15.29	16.6	14.47	9.64
Pendleton WSC	24.43	20.30	23.94	17.23	22.73	23.18
Salado WSC	9.76	7.60	8.80	9.8	9.6	14.47

\* Not Reported

## Exempt Well Production

Each year, the exempt wells that have been registered are evaluated. The aquifer from which they are producing is determined and an estimate of their total annual production is calculated. The results are shown below for exempt wells registered through December 31, 2018. Most of the exempt wells in Bell County are used for domestic purposes and their use estimate assumes 106 gallons/person per day (USGS estimate of domestic use outside of a municipal water system) and 2.84 persons/household (U.S. Census - Bell County Average 2016). Exempt well use estimate factors out all plugged, capped, monitor and inactive wells in the database.

### 2018 Exempt Well Production

	Reserved	Estimated Use*	# Wells
Edwards (BFZ)	825 ac-ft	484 ac-ft	809
Trinity	1,419 ac-ft	529 ac-ft	1,384
Other Aquifers	N/A	677 ac-ft	1,467
Total	2,244 ac-ft	1,689 ac-ft	3,660

*\* Domestic use estimate assumes 106 gallons/person per day (USGS estimate of domestic use outside of a municipal water system) and 2.84 persons/household (U.S. Census - Bell County average 2016)*

*See Appendix E for 2018 Exempt Well Use*

## Combined Well Production Data

Combining the production from the non-exempt wells with the estimated production from the exempt wells, the following production figures result:

Aquifer	Non-Exempt Well Production (Ac-Ft / Year)	% of Total Permitted	Estimated Exempt Well Production (Ac-Ft / Year)	% of Total Reserved	Total Production (Ac-Ft / Year)	% of Total Available
Edwards (BFZ)	2,077.87	82.79	484	58.67	2,561.87	39.60
Trinity	1,484.77	33.02	529	37.28	2,013.77	28.49
Other Aquifers	356.96	61.70	677	N/A	1,033.96	N/A
Total	3,919.6	51.68	1,689	75.27	5,608.60	33.80

The chart above shows that overall, exempt wells account for approximately 75.27% of all the groundwater produced in Bell County. In the Trinity, 37.28% of production is attributed to exempt wells and in the Edwards BFZ, exempt wells account for 58.67% of groundwater production.

Overall, production from the Edwards BFZ aquifer accounts for 39.60% of total groundwater used in Bell County and the Trinity aquifer accounts for 28.49% of total groundwater used in Bell County.

**Modeled Available Groundwater - Analysis of Permits and Exempt Use Reserves (in acre feet)**

Aquifer	MAG Modeled *	Reserved for Exempt	Managed	HEU Permit	Operating Permit	Remaining MAG
Edwards (BFZ)	6,469	825	5,644	2,209.70	300.12	3,134.18
Trinity	7,068	1,419	5,649	1,502.60	2,993.49	1,152.91
Paluxy	96			0	0	96
Glen Rose (Upper)	880	693	187	61.90	70.15	54.95
Hensell (Middle)	1,099	548	551	259.30	207.46	84.24
Hosston (Lower)	4,993	178	4,815	1,181.40	2,715.88	917.72

\* The Modeled Available Groundwater (MAG) is the estimated amount of water available for permitting assigned to Clearwater UWCD by the Executive Administrator of TWDB.

See Appendix F for the 2018 Edwards and Trinity Aquifer Status Reports

#### 4. Annual Newsletter

Objective: Each year, the District will disseminate educational information on groundwater through publication of a District newsletter.

*Objective Satisfied*

Annually, the District publishes a newsletter and mails it to registered well owners in Bell County. In 2018 the total number of newsletters printed were 3,500 with 3,200 copies directly mailed to well owners. The others are handed out to people that come into the office and electronic copies are emailed out to permit holders and other interested parties.

See Appendix G for Annual Newsletter.

Online: <http://www.cuwcd.org/district-overview/district-newsletter/>

## B. Controlling and Preventing Waste of Groundwater

### Outreach and Education

Objective: Each year, the District will disseminate educational information on controlling and preventing the waste of groundwater focusing on water quality protection through at least one classroom or public presentation.

#### *Objective Satisfied*

District staff is available to speak to any group within our geographical boundaries. In 2018, District staff reached over 2,932 adults and children in Bell County directly through giving presentations and making contact at event booths. We often give power point presentations to adult groups explaining the District and how we function along with covering important water topics like conservation and watershed management.

In the classroom, we provide the Major Rivers curriculum and give supporting presentations with an Enviroscope watershed model and rainfall simulator. We make sure to always have handouts for the kids like color changing pencils, rulers and cups that change color when cold water is poured in. All handouts are branded with district information and most items have water conservation tips printed on them.

*See Appendix H for Education and Outreach Events.*

## C. Addressing Conjunctive Surface Water Management Issues

### Regional Planning Process Participation

Objective: Each year, the District will participate in the regional planning process by attending a minimum of two meetings of the Brazos G Regional Water Planning Group per fiscal year.

#### *Objective Satisfied*

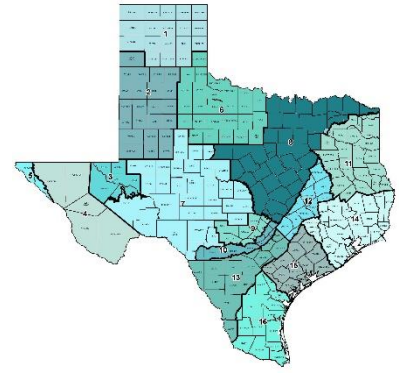
During FY18, District Representative Judy Parker and District General Manager Dirk Aaron attended the scheduled meetings listed below. Judy Parker was also elected by the GMA8 Membership to represent the Groundwater Management Area as an appointed member of Region G.



November 1, 2017	Attended	May 9, 2018	Attended
February 7, 2018	Attended		

Online: <http://www.brazosgwater.org/>

In addition to the regional planning group, District Representative Judy Parker and District General Manager Dirk Aaron also attended the meetings for Groundwater Management Area 8. Groundwater Management Areas were created in order to provide for the conservation, preservation, protection, recharging, and prevention of waste of the groundwater, and of groundwater reservoirs or their subdivisions, and to control subsidence caused by withdrawal of water from those groundwater reservoirs or their subdivisions, consistent with the objectives of Section 59, Article XVI, Texas Constitution.



June 27, 2018

Attended

Online: <http://www.gma8.org>

#### D. Addressing Natural Resource Issues Which Impact the Use and Availability of Groundwater, and which are impacted by the Use of Groundwater

##### **Monitoring Water Quality**

Objective: Each year the District will monitor water quality within the District by obtaining water samples from wells and testing the water quality of at least 6 wells.

##### *Objective Satisfied*

The District has an in-house water quality lab and offers a free screening service to registered well owners. Testing parameters include coliform bacteria; alkalinity; conductivity / total dissolved solids; fluoride; hardness; nitrate; nitrite; pH; phosphate; and sulfate. During FY18, the staff conducted screening on 107 groundwater samples. 28 samples tested were from the Edwards (BFZ) aquifer, 8 samples from the Upper Trinity, 54 samples from the Middle Trinity, 6 samples from the Lower Trinity, and 11 samples from other formations.

The District's lab is intended to provide a general water quality screening only. When a certified test is needed, the District sends properly collected well samples to BioChem located in West, Texas. During FY18, no samples were sent out for certified testing.

*A summary of the well screening results are shown in Appendix I.*

#### E. Addressing Drought Conditions

The District's Management Plan requires that the General Manager, Staff and Board of Directors review the District's drought status on a monthly basis. The decisions to declare drought levels per the District's Drought Management Plan approved December 17, 2009, are reviewed weekly by the General Manager. The Drought Management plans are designed to reflect conditions of the Trinity

and Edwards (BFZ) Aquifers independently of each other based on the specified triggers (PDI and/or Spring Flow).

### 1. Monitor Drought Conditions in the Edwards Aquifer

Objective: Each year, the District will monitor drought conditions in the Edwards aquifer through the process established in the drought management plan for the Edwards aquifer adopted by the Board of Directors.

#### Objective Satisfied

Under the Edwards BFZ Drought Management Plan, a drought stage is triggered when either the Precipitation Deficit Index (PDI) is less than a drought state trigger condition exceeding for a period of 28 consecutive days and shall be reduced or terminated when the PDI is greater than the trigger condition exceeding for a period of 42 consecutive days, or the average spring discharge measured via stream flow gauges in Salado Creek fall below the trigger level for the periods described time.

Online: <http://www.cuwcd.org/regulatory-program/drought-management/edwards-drought-management-plan/>

**EDWARDS BFZ AQUIFER DROUGHT STATUS**



Below are the declared stages during the fiscal year.

Date	Declared Drought Stage	Salado Creek Acre ft/Month	Salado Creek CFS	PDI Total	PDI % Total
10/4/2017	No Drought	1,411.19	24.22	32.35	98.01
12/10/2017	No Drought	938.98	15.78	29.86	90.49
1/8/2018	No Drought	786.65	13.22	30.62	92.77
1/31/2018	No Drought	841.39	14.14	28.31	85.79
3/8/2018	No Drought	743.8	12.5	27.43	83.10
4/2/2018	No Drought	1,035.37	17.4	27.73	84.02
5/7/2018	Stage 1 Drought	751.66	12.63	27.73	79.73
5/24/2018	Stage 1 Drought	695.96	11.696	25.55	77.44
5/31/2018	Stage 1 Drought	470.44	7.906	25.032	75.85
6/10/2018	Stage 1 Drought	395.465	6.646	24.578	74.47
6/21/2018	Stage 1 Drought	367.974	6.646	24.852	75.31
6/24/2018	Stage 1 Drought	343.577	5.774	25.08	75.78
7/9/2018	Stage 1 Drought	315.848	5.308	24.71	74.87
7/15/2018	Stage 1 Drought	283.597	4.766	24.547	74.38

7/22/2018	Stage 1 Drought	261.342	4.392	24.347	73.77
7/30/2018	Stage 3 Drought	N/A	4.574	23.966	72.62
9/12/2018	Stage 3 Drought	10,353.26	173.99	26.029	78.87

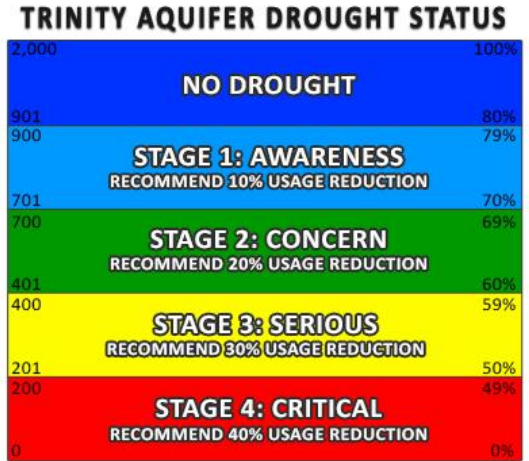
## 2. Monitor Drought Conditions in the Trinity Aquifer

Objective: Each year, the District will monitor drought conditions in the Trinity aquifer through the process established in the drought management plan for the Trinity aquifer adopted by the Board of Directors.

### *Objective Satisfied*

Under the Trinity Aquifer Drought Management Plan, a drought stage is only to be triggered when the Precipitation Deficit Index (PDI) is less than a drought state trigger condition exceeding for a period of 28 consecutive days and shall be reduced or terminated when the PDI is greater than the trigger condition exceeding for a period of 42 consecutive days.

Online: <http://www.cuwcd.org/regulatory-program/drought-management/edwards-drought-management-plan/>



Below are the declared stages during the fiscal year.

Date	Declared Drought Stage	PDI Total	PDI % Total
10/4/2017	No Drought	32.88	99.63
12/10/2017	No Drought	30.11	91.25
1/8/2018	No Drought	31.644	95.89
1/31/2018	No Drought	29.574	89.61
3/7/2018	No Drought	29.29	88.76
4/2/2018	No Drought	29.88	90.55
5/7/2018	No Drought	27.39	83.01
5/24/2018	No Drought	27.068	82.02
5/31/2018	No Drought	26.34	79.82
6/10/2018	Stage 1 Drought	25.66	77.76
6/20/2018	Stage 1 Drought	25.83	78.27
6/24/2018	Stage 1 Drought	25.95	78.65

7/9/2018	Stage 1 Drought	25.63	77.66
7/15/2018	Stage 1 Drought	26.04	78.98
7/22/2018	Stage 1 Drought	25.73	77.96
7/30/2018	Stage 1 Drought	25.51	77.28
9/10/2018	Stage 1 Drought	24.14	73.13

## F. Addressing Conservation, Recharge Enhancement, Rainwater Harvesting, Precipitation Enhancement, and Brush Control, Where Appropriate and Cost-Effective

### 1. Conservation

Objective: Each year, the District will promote conservation by conducting an annual scholastic contest on water conservation or; distributing conservation brochures/literature to the public.

#### *Objective Satisfied*

The District's Management Plan requires promotion of conservation by one outreach method/activity. During 2018, the District exceeded this requirement by aggressive outreach through classroom presentations, District's website, and other public presentations such as the annual Water Symposium. District staff reached over 2,932 adults and children in Bell County directly through giving presentations and making contact at event booths where conservation materials were both discussed and handed out.

*See Appendix H for Education and Outreach Events.*

### 2. Rainwater Harvesting

Objective: Each year, the District will promote rainwater harvesting by posting information on rainwater harvesting on the District web site.

#### *Objective Satisfied*

The District's Management Plan requires promotion of rainwater harvesting by posting information on the District website. The District satisfied this requirement by including a segment on rainwater harvesting on its website under the Education menu tab along with a link to the Texas A&M AgriLife Extension website and their Rainwater Harvesting Manual. Also included are links to Rainwater Harvesting Contacts and Suppliers and to the Texas A&M AgriLife Extension manual on Rainwater Harvesting Landscape Methods. The District's office has a rainwater harvesting setup for demonstration purposes.

<http://www.cuwcd.org/education/rainwater-harvesting/>

*A copy of the posted information is included under Appendix J.*



### 3. Brush Control

Objective: Each year, the District will provide information relating to brush control on the District web site.

*Objective Satisfied*

The District's Management Plan requires promotion of conservation by providing information relating to brush control on the District website. The District satisfied this requirement by including a segment on brush control on its website under the Education menu tab. For additional information on brush control, links to the Texas A&M AgriLife Extension website are provided. Also included is a link to the Brush Management Fact Sheet produced by Environmental Defense.

<http://www.cuwcd.org/education/brush-control/>

*A copy of the posted information is included under Appendix K.*

### 4. Recharge Enhancement

Objective: Each year, the District will provide information relating to recharge enhancement on the District web site.

*Objective Satisfied*

The District's Management Plan requires promotion of conservation by providing information relating to recharge enhancement, and the District satisfied this requirement by including a segment on recharge enhancement on its website under the Education menu tab. For additional information on recharge enhancement, links to the Texas State Soil and Water Conservation website, and the Leon River Restoration Project website are provided. In addition, the District has contracted with Baylor University to help gain a better scientific understanding of the Edwards (BFZ) and its recharge zone.

<http://www.cuwcd.org/education/recharge-enhancement/>

*A copy of the posted information is included under Appendix L.*

## G. Addressing in a Quantitative Manner the Desired Future Conditions of the Groundwater Resources

### 1. Salado Springs

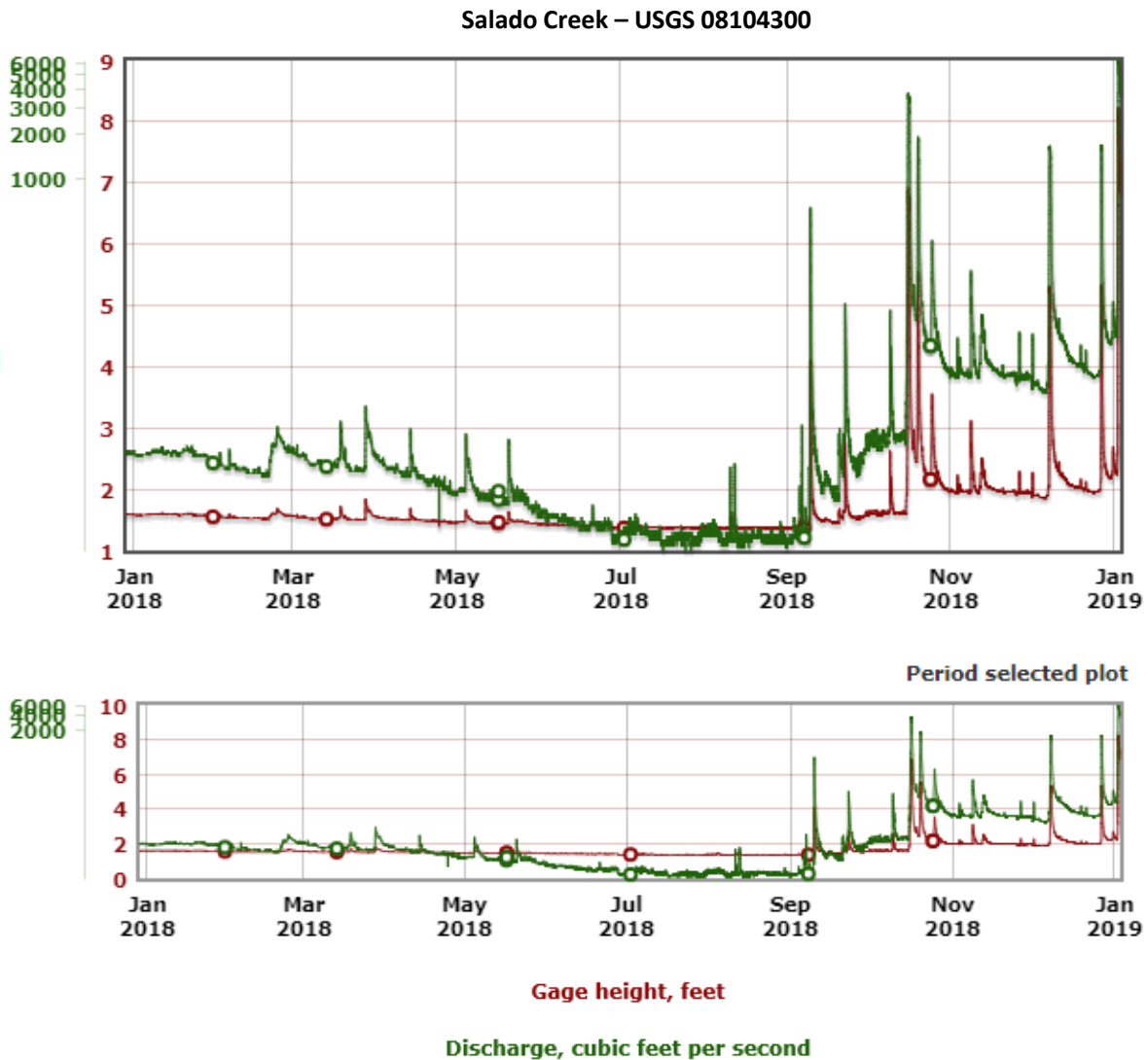
Objective: Each year, the District will include a summary of the monthly average discharge rate of Salado Springs and a discussion of the conservation measures implemented (if any are necessary) to avoid impairment of the Desired Future Conditions for the Edwards aquifer established by GMA-8, in the Annual Report to the Board of Directors.

*Objective Satisfied*

The gauges in the Salado Creek have been an important mechanism to protect spring flow. The District began collecting data from the Salado Creek stream flow gauges during FY08 with the assistance of multiple contractors. During the spring of 2013 an upgraded gauge package by the USGS Water Science Group was installed and the process of analyzing the data and recalibrating the system began. This process was lengthy, but essential to ensure accuracy of the data collected. The new gauges and relationship with the USGS have proved to be an important step forward in monitoring spring flow. The live data can be found online on our website:

<http://www.cuwcd.org/salado-springs/salado-creek-gauges/>

Below is a screen shot of the spring flow data for the calendar year 2018.



## 2. (a) Static Water Level Measurements

Objective: Each year, the District will collect at least 5 water-level measurements from the Trinity aquifer monitor wells located in the District.

*Objective Satisfied*

The Texas Water Development Board (TWDB) typically measures water levels in selected wells in January each year. Clearwater measures water levels in selected wells four times annually to collect more comprehensive data on water levels in Bell County.

Comparing the water level measurements taken by the District with those taken by the TWDB is sometimes difficult due to differences in measurement procedures and equipment. Clearwater primarily uses a Sonic Wave Meter and only utilizes an e-line if necessary. Large producers are asked to turn the pump off at least one hour prior to the measurement to allow the aquifer levels time to stabilize. TWDB typically uses a steel tape or an airline and does not request the pump to be turned off. During calendar year 2018, the District took 11 water level measurements from 50 wells.

The District has been increasing continuous monitor well locations throughout Bell County, thus some wells have very little historical information. Adding these wells is essential to have a broader spectrum of data to analyze in future years. The District has 13 continuous monitor wells that are monitored by TWDB. The continuous water level measurements can be viewed on TWDB's website at: <https://waterdatafortexas.org/groundwater>.

*A copy of the measurements is included under Appendix M.*

## 2. (b) Changes in Water Levels

Objective: Each year, the Annual Report to the Board of Directors will include a discussion of the change in water-levels in each Trinity aquifer subdivision for which a Desired Future Condition is established by GMA-8.

### *Objective Satisfied*

The District prepares a monthly status report (Appendix F – Trinity Aquifer Status Report 2018) that explains the status of the Trinity aquifers by layer at any given time. The DFC analysis from 2000 to present compares DFC adopted drawdown to actual drawdown figures for Bell County. In addition, potential production from both permitted wells and exempt wells is compared to MAG with figures showing how much actual water is available for permitting.

## 5. Miscellaneous Activities

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In addition to the Management Plan requirements, Clearwater is involved in several miscellaneous activities as follows:

### A. Abandoned Wells

The District continues to coordinate with the Texas Department of Licensing and Regulation (TDLR) to identify and investigate reports of abandoned wells. After initial investigation, staff refers abandoned wells to TDLR for further investigation, determination of corrective action, and enforcement. The District did not refer any abandoned wells to TDLR during the calendar year 2018.

The District continues to work with the Bell County Public Health District for assistance in locating

abandoned wells when septic systems are inspected. The District promotes the plugging of abandoned wells by distributing educational information at various conferences and events and hosting well plugging demonstrations with the Texas A&M AgriLife Extension.

According to records from the Texas Department of Licensing and Regulation, during 2018 a total of 8 wells were plugged in Bell County.

## B. Bell County Water Symposium

Clearwater sponsored its eighteenth annual water symposium on November 15, 2018 at the Texas A&M University - Central Texas Campus. Event partners included Bell County Engineer's Office, HALFF Associates, LRE Water LLC, Lloyd Gosselink Attorneys at Law, and Texas A&M AgriLife Extension-Bell County.

Topics that were discussed:

- *State of the District* - Leland Gersbach, Board President, Clearwater UWCD and Dirk Aaron, General Manager, Clearwater UWCD
- *What is the Status & Future of the Trinity Aquifer? Regional Drawdown Impacting Rural Landowners.* – Mike Keester, P.G., LRE Water LLC
- *Who & What Determines the Future of Williamson County Groundwater? Overview of the Texas Priority Groundwater Management Area Designations by TCEQ & TWDB.* – Troupe Brewer, Attorney, Lloyd Gosselink Rochelle & Townsend
- *What is Happening in the Brazos River Basin and BRA?* – Aaron Abel, Water Services Manager, Brazos River Authority
- *Texas Water Development Board Update (Science and Infrastructure)* – Larry French, P.G., Groundwater Division Director, Texas Water Development Board
- *Water for Texas, Sharing the Pool* – Dr. Charles Porter, Assistant Professor & Author, St. Edwards University
- *Water Issues in Texas: Looking Forward by Looking Back at the Texas Legislature. In the Courts: Developments in the Law Governing Groundwater Rights and Management.* – Ty Embrey, Attorney, Lloyd Gosselink Rochelle & Townsend; Mike Gershon, Attorney, Lloyd Gosselink Rochelle & Townsend
- *Collaboration for Discernment of the Lower Trinity Aquifer (30 Day Aquifer/Pump Test)* – Dr. Joe Yelderman P.G., Professor of Geology, Baylor University; Bob Harden P.E., Harden Hydrology; Mike Keester P.G., LRE Water LLC
- *Texas 4-H2O Youth Ambassador Program Update* – David Smith, Texas AgriLife Extension Program Specialist, 4-H2O Program Coordinator; Kolby Dague & Luke Read, 4-H2O Ambassadors, Bell County
- *Rainwater Harvesting, "Future Alternative Today"* – Billy Kniffen, Retired Extension Agent & Retired State Specialist, Texas A&M AgriLife Extension Service
- *Evaluation* - Whitney Grantham, Natural Resource Extension Agent, Texas A&M AgriLife Extension

The District set up a display booth and distributed water conservation packets as well as other information on water quality protection and information on the aquifers in Bell County.

Approximately 158 people attended the symposium.

*Refer to Appendix N for an agenda of the meeting.*

Online: <http://www.cuwcd.org/education/annual-water-symposium/>

## C. Internet Site

The District's web site continues to grow on a monthly basis. The web site contains general information about the District and Board of Directors along with a calendar of events and meeting agendas. Press releases and other water related articles are posted to continually provide water related resources to the residents of Bell County.

Below are some highlights of the website available to the public:

- [Current Drought Status](#)
- [Educational Resources](#)
- [Texas Drought Monitor](#)
- [Salado Creek Gauges](#)
- [District Rules](#)
- [Management Plan](#)
- [Access to online GIS Maps](#)
- [Link to TWDB Groundwater Levels](#)
- [Link to TWDB Texas Reservoir Levels](#)
- [Public Records](#)
- [District Forms and Documents](#)

The website can be viewed at <http://www.cuwcd.org>

## 6. Summary

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Based on the leadership of the Board of Directors and management under the executive direction of the General Manager, District staff continued expanding their efforts in developing in-depth aquifer science, enhancing educational outreach to public schools and civic organizations, and refining data base management for the District records.

The District staff has expanded the educational efforts in a partnership with Texas A&M AgriLife Extension, Master Naturalist, and Master Gardener programs. Strategies include: an education trailer (mobile classroom), classroom curriculum, science day events, field days, Earth Day events, and informative presentations for civic organizations.

Clearwater UWCD has maintained the relationships with Bell County, the Village of Salado, USGS, and Baylor University to continue efforts to better understand the Edwards BFZ Aquifer and its complex of springs and recharge features. Knowing that the Salado Salamander is designated as threatened by USFWS, validated the continued need to better understand the habitat and identified threats. Maintaining the regulatory system of protecting the spring flow has been validated by the USFWS decision to list the salamander as threatened rather than endangered. The 2015, 2016 and 2017 final reports from USFWS can be found on our website at <http://www.cuwcd.org/salado-springs/salado-salamander/>.

The District is also committed to continuing our efforts to enhance the network of monitor wells in the three layers of the Trinity Aquifer in order to measure drawdown relative to pumping. This allows the Board of Directors to manage the aquifers to the DFC rather than simply to the MAG. The District continues to monitor over 50 wells in both the Trinity and Edwards (BFZ) Aquifers.

# *Appendix A*

**Clearwater Underground Water Conservation  
Adopted Budget FY2018**

**REVENUE**

Application Fee Income	20,000.00
Bell CAD Current Year Tax	696,520.00
Bell CAD Delinquent Tax	5,000.00
Interest Income	2,000.00
Transport Fee Income	1,000.00
<b>Total Income</b>	<b>724,520.00</b>

**EXPENDITURES**

**Administrative Expenses**

Audit	6,600.00
Conferences & Prof Development	3,500.00
Contingency Fund	10,269.00
Director Expenses	7,500.00
Director Fees	12,750.00
Dues & Memberships	2,500.00
Election Expense	0.00
GMA 8 Expenses	10,000.00
Meals	1,000.00
Mileage Reimbursements	5,000.00
Travel & Hotel	4,500.00
<b>Total · Administrative Expenses</b>	<b>63,619.00</b>

**Salary Costs**

Administrative Assistant	46,986.00
Educational Coord/Support Tech	40,000.00
Manager	77,900.00
Part Time/Intern	0.00
Office Assistant/Field Tech	35,000.00
Health Insurance	24,000.00
Payroll Taxes & Work Comp	20,000.00
Retirement	8,995.00
Payroll Expenses	125.00
<b>Total · Salary Costs</b>	<b>253,006.00</b>

**Operating Expenses**

Advertisement	3,500.00
Appraisal District	8,000.00
Clearwater Studies	185,020.00
Spring Flow Gage System	16,000.00
Computer/GIS/Website/Consulting	27,000.00
Computer Licenses/Virus Prctn	1,500.00
Computer Repairs and Supplies	1,500.00
Computer Software & Hardware	15,000.00
Copier/Scanner/Plotter	6,000.00
Educational Outreach/Marketing	30,000.00
Furniture & Equipment	1,500.00
Legal	33,000.00
Office Supplies	3,000.00
Permit Reviews	20,000.00
Postage	2,500.00
Printing	2,500.00
Reserve for Uncollected Taxes	20,000.00
Subscriptions	900.00
Mobile Classroom Expense	1,500.00
Vehicle Expense	4,000.00
<b>Total · Operating Expenses</b>	<b>382,420.00</b>

**Total · Facility Costs** 17,075.00

**Total · Utilities** 8,400.00

**Total Expenditures** **724,520.00**

*For a detailed copy of the FY18 Budget, please contact CUWCD at 254-933-0120*

8/25/2017

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# *Appendix B*



**CLEARWATER UNDERGROUND  
WATER CONSERVATION DISTRICT**

**BASIC FINANCIAL STATEMENTS  
AND  
INDEPENDENT AUDITORS' REPORT**

**SEPTEMBER 30, 2018**

***ALTON D. THIELE, P.C.***

**CERTIFIED PUBLIC ACCOUNTANT**

**300 E. AVENUE C**

**P.O. BOX 808**

**BELTON, TX 76513-0808**

CLEARWATER UNDERGROUND WATER CONSERVATION DISTRICT  
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**ALTON D. THIELE, P.C.**

**CERTIFIED PUBLIC ACCOUNTANT**

**300 EAST AVENUE C**

**P.O. BOX 808**

**BELTON, TX 76513-0808**

**INDEPENDENT AUDITORS' REPORT**

To the Board of Directors  
Clearwater Underground Water Conservation District  
Belton, Texas

We have audited the accompanying financial statements for the governmental activities and the aggregate remaining fund information of the Clearwater Underground Water Conservation District (the District), as of and for the year ended September 30, 2018, which collectively comprise the District's basic financial statements as listed in the table of contents, and the related notes to the financial statements.

**Management's Responsibility for the Financial Statements**

Management is responsible for the preparation and fair presentation of these financial statements in accordance with accounting principles generally accepted in the United States of America; this includes the design, implementation, and maintenance of internal control relevant to the preparation and fair presentation of financial statements that are free from material misstatement, whether due to fraud or error.

**Auditor's Responsibility**

Our responsibility is to express an opinion on these financial statements based on our audit. We conducted our audit in accordance with auditing standards generally accepted in the United States of America and the standards applicable to financial audits contained in *Government Auditing Standards*, issued by the Comptroller General of the United States. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the financial statements are free of material misstatement.

An audit involves performing procedures to obtain audit evidence about the amounts and disclosures in the financial statements. The procedures selected depend on the auditor's judgment, including the assessment of the risks of material misstatement of the financial statements, whether due to fraud or error. In making those risk assessments, the auditor considers internal control relevant to the entity's preparation and fair presentation of the financial statements in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the entity's internal control. Accordingly, we express no such opinion. An audit also includes evaluating the appropriateness of accounting policies used and the reasonableness of significant accounting estimates made by management, as well as evaluating the overall presentation of the financial statements.

We believe that the audit evidence we have obtained is sufficient and appropriate to provide a reasonable basis for our opinion.

**Opinion**

In our opinion, the financial statements referred to above present fairly, in all material respects, the net position of the governmental activities and the aggregate remaining fund information of Clearwater Underground Water Conservation District, as of September 30, 2018, and the respective changes in fund balances in conformity with accounting principles generally accepted in the United States of America.

**Report Issued In Accordance with *Government Auditing Standards***

In accordance with *Government Auditing Standards*, we have also issued our report dated February 11, 2019, on our consideration of the District's internal control over financial reporting (internal control) and on our tests of its compliance with certain provisions of laws, regulations, contracts, and other matters. The purpose of that report is to describe the scope of our testing of internal control and compliance, and the results of that testing, and not to provide an opinion on internal control or on compliance. This report is an integral part of an audit performed in accordance with *Government Auditing Standards* and should be considered in assessing the results of our audit.

**Other Matters**

*Required Supplementary Information*

Accounting principles generally accepted in the United States of America require that the management's discussion and analysis on pages 3 through 5 and budgetary comparison information on page 16 be presented to supplement the financial statements. Such information, although not a required part of the basic financial statements, is required by the Governmental Accounting Standards Board (GASB), who considers it to be an essential part of financial reporting for placing the basic financial statements in an appropriate operational, economic, or historical context. We have applied certain limited procedures to the required supplementary information in accordance with auditing standards generally accepted in the United States of America, which consisted of inquiries of management about the methods of preparing the information and comparing the information for consistency with management's responses to our inquiries, the basic financial statements, and other knowledge we obtained during our audit of the basic financial statements. We do not express an opinion or provide any assurance on the information because the limited procedures do not provide us with sufficient evidence to express an opinion or provide any assurance.

*Other Information*

Our audit was conducted for the purpose of forming an opinion on the financial statements that collectively comprise the District's basic financial statements. The Texas Supplementary Information, on pages 18 through 21, is presented for purposes of additional analysis and is not a required part of the basic financial statements of the District. Such information has been subjected to the auditing procedures applied in the audit of the basic financial statements and, in our opinion, is fairly presented in all material respects, in relation to the basic financial statements taken as a whole.



Belton, Texas  
February 11, 2019

**CLEARWATER UNDERGROUND WATER CONSERVATION DISTRICT  
MANAGEMENT'S DISCUSSION AND ANALYSIS  
SEPTEMBER 30, 2018**

The management of the Clearwater Underground Water Conservation District (the District), offers readers of the District's annual financial report this narrative overview and analysis of the District's financial performance during the fiscal year ended September 30, 2018. This discussion and analysis is intended to be an easily readable analysis of the District's financial activities based on currently known facts, decisions, and conditions. Please read it in conjunction with the Independent Auditors' Report and the District's basic financial statements and the related notes.

**FINANCIAL HIGHLIGHTS**

The District's total net position,	\$ 1,363,564
Cash and investments,	\$ 753,469
Deferred Inflows of Resources	\$ 28,293
Total tax revenues,	\$ 692,683
Operational expenditures,	\$ 621,493

**OVERVIEW OF THE FINANCIAL STATEMENTS**

This annual financial report consists of, but is not limited to, the following: Management's Discussion and Analysis (this section, which is intended to serve as an introduction to the basic financial statements), the basic financial statements, and the related notes to the financial statements. The District is a governmental entity and follows the accrual basis of fund accounting for a governmental entity. The District is funded primarily by property tax revenue from within the District's boundaries to provide a means by which underground water is controlled and monitored throughout the District.

**REPORT LAYOUT**

In addition to the Management's Discussion and Analysis (MD&A) (pages 3-5), the report consists of basic financial statements, notes to the financial statements, required supplementary information and supplementary information. The basic financial statements are highly condensed and present a government-wide view of the District's finances.

The *Government-wide Financial Statements* (pages 6-9) are designed to be more corporate-like in that all activities are consolidated into a total for the District. The *Statement of Net Position* presents information on all District assets and liabilities, with the difference between the two reported as net position. The *Statement of Activities* presents information about the District's revenues and expenses regardless of when cash is received or paid.

The Fund Financial Statements (presented in conjunction with Government-wide Financial Statements, pages 6-9) are a grouping of related accounts that is used to maintain control over resources that have been segregated for specific activities or objectives. The District, like other state and local governments, uses fund accounting to ensure and demonstrate compliance with finance-related legal requirements. All funds of the District can be divided into two categories: governmental funds and proprietary funds. However, there were no proprietary funds. Fund financial statements, unlike government-wide financial statements, focus on near-term inflows and outflows of spendable resources, as well as on spendable resources available at the end of the fiscal year.

The *Notes to the Financial Statements* (pages 10-14) provide additional information that is essential to a full understanding of the data provided in the government-wide basic financial statements. Required and other supplemental information (pages 18-21) is also provided for additional information and analysis.

**CLEARWATER UNDERGROUND WATER CONSERVATION DISTRICT  
MANAGEMENT'S DISCUSSION AND ANALYSIS  
SEPTEMBER 30, 2018**

**FINANCIAL ANALYSIS OF THE DISTRICT**

*Statement of Net Position:* The following table summarizes the net position of the District

	<u>2018</u>	<u>2017</u>	<u>Change</u>
<b>Assets</b>			
Current Assets	\$ 781,851	\$ 683,924	\$ 97,927
Capital Assets, net of accumulated depreciation	<u>590,206</u>	<u>586,182</u>	<u>4,024</u>
<b>Total Assets</b>	<u>1,372,057</u>	<u>1,270,106</u>	<u>101,951</u>
<b>Liabilities</b>			
Current Liabilities	<u>8,493</u>	-	<u>8,493</u>
<b>Total Liabilities</b>	<u>8,493</u>	-	<u>8,493</u>
<b>Deferred Inflows of Resources</b>	<u>-</u>	<u>20,369</u>	<u>(20,369)</u>
<b>Net Position</b>			
Investment in Capital Assets	590,206	586,182	4,024
Unreserved Net Position	<u>752,964</u>	<u>663,555</u>	<u>89,409</u>
<b>Total Net Position</b>	<u>1,343,170</u>	<u>1,249,737</u>	<u>93,433</u>
Prior Period Adjustment	<u>20,394</u>	-	<u>20,394</u>
<b>Total Net Position, as adjusted</b>	<u>1,363,564</u>	<u>1,249,737</u>	<u>113,827</u>
Total Liabilities, Deferred Inflows and Net Position	<u>\$ 1,372,057</u>	<u>\$ 1,270,106</u>	<u>\$ 101,951</u>

*Statement of Activities:* The following table summarizes the changes in net position

	<u>2018</u>	<u>2017</u>	<u>Change</u>
Tax Revenue	\$692,683	\$660,854	\$ 31,829
Interest and Other Revenues	22,269	21,731	538
<b>Expenditures</b>	<u>(621,493)</u>	<u>(563,449)</u>	<u>58,044</u>
<b>Change in Net Position</b>	<u>\$93,459</u>	<u>\$ 119,136</u>	<u>\$(25,677)</u>

As shown in the above information, the District improved financially, overall. However, the District's change in net position decreased by \$ 25,677. With the operational expenditures of \$(621,493), which includes increases in healthcare and studies costs. Capital outlay of \$35,232 were greater than depreciation of \$31,208 which created an increase in investment in capital assets of \$4,024.

**CLEARWATER UNDERGROUND WATER CONSERVATION DISTRICT  
MANAGEMENT'S DISCUSSION AND ANALYSIS  
SEPTEMBER 30, 2018**

**BUDGETARY HIGHLIGHTS**

Actual tax revenues received were less than the budgeted tax revenues by \$(17,492) or 2%. However, actual operational expenditures were 19% less than budgeted expenditures. This resulted in an increase in fund balance of \$81,511. The budget was legally adopted according to established guidelines and the Board of Directors legally adopted amendments to individual budget items during the fiscal year. (See page 17 for details)

**CAPITAL ASSETS**

During the year, capital expenditures were made, so that at September 30, 2018, the District had a net increase in Capital Assets of \$4,024. The Investment in Capital Assets, net of depreciation and related debt, at fiscal year-end was \$590,206.

Additional information regarding Capital Assets can be found in the notes to the financial statements. (Note-3, page 13)

**DEBT OUTSTANDING**

The District had no long-term debt as of the fiscal year ended September 30, 2018.

**ECONOMIC FACTORS AND NEXT YEAR'S BUDGET AND RATES**

The District's property tax rate for the 2018/2019 fiscal year (FY19) was lowered to \$0.00383 per \$100 valuation. The estimated taxable property value is 18,701,608,943 for total expected tax revenue of \$716,272. Other Income and delinquent property taxes is estimated at \$43,500. The District's budgeted expenditures for FY19 are expected to be \$759,751 resulting in a balanced budget for the coming fiscal year.

**FINANCIAL CONTACT**

The District's financial statements are designed to present users (citizens, taxpayers, creditors, and regulatory agencies) with a general overview of the District's finances and to demonstrate the District's accountability. If you have questions about the report or need additional financial information, please contact the District Manager at 700 Kennedy Ct., PO Box 1989, Belton, TX 76513.

**CLEARWATER UNDERGROUND WATER CONSERVATION DISTRICT  
STATEMENT OF NET POSITION AND GOVERNMENTAL FUNDS BALANCE SHEET**

SEPTEMBER 30, 2018

	Governmental Funds		Statement of Net Position
	General Fund	Adjustments	
<b><u>ASSETS</u></b>			
Cash in Banks	\$ 14,238	\$ -	\$ 14,238
Invested Funds	739,231	-	739,231
Receivables:			
Taxes	28,293	-	28,293
Miscellaneous	90	-	90
Capital Assets Not Being Depreciated:			
Land	-	59,981	59,981
Capital Assets (net of accumulated depreciation):			
Infrastructure	-	530,224	530,224
<b>Total Assets</b>	<b>\$ 781,852</b>	<b>\$ 590,205</b>	<b>\$ 1,372,057</b>
 <b><u>LIABILITIES</u></b>			
Liabilities			
Current and Non-current	\$ 8,493	\$ -	\$ 8,493
<b>Total Liabilities</b>	<b>\$ 8,493</b>	<b>\$ -</b>	<b>\$ 8,493</b>
 <b><u>DEFERRED INFLOWS OF RESOURCES</u></b>			
Property Tax Revenue	\$ 28,293	\$ (28,293)	\$ -
 <b><u>FUND EQUITY</u></b>			
Fund Balances			
Unassigned	\$ 745,066	\$ (745,066)	\$ -
<b>Total Fund Equity</b>	<b>745,066</b>	<b>(745,066)</b>	<b>-</b>
<b>Total Deferred Inflows, Liabilities, and Fund Equity</b>	<b>\$ 781,852</b>		
 <b><u>NET POSITION</u></b>			
Investment in Capital Assets		590,206	590,206
Unreserved		752,964	752,964
<b>Total Net Position</b>		<b>\$ 1,343,170</b>	<b>1,343,170</b>
Prior Period Adjustment		20,394	20,394
<b>Total Net Position, adjusted</b>		<b>\$ 1,363,564</b>	<b>1,363,564</b>
<b>Total Deferred Inflows, Liabilities, and Net Position</b>			<b>\$ 1,372,057</b>

The accompanying notes are an integral part of these financial statements.  
See Independent Auditors' Report.



**CLEARWATER UNDERGROUND WATER CONSERVATION DISTRICT  
RECONCILIATION OF THE GOVERNMENTAL FUNDS BALANCE SHEET TO THE  
STATEMENT OF NET POSITION  
SEPTEMBER 30, 2018**

Total Fund Balances for Governmental Funds (Page 6) \$ 745,066

Total Net Position Reported for Governmental Activities in the  
Statement of Net Position is Different Because:

Capital assets used in governmental activities are not  
financial resources and therefore are not reported in the funds.  
Those assets consist of:

Land	59,981	
Buildings, Equipment and Infrastructure	674,415	
Accumulated Depreciation	<u>(144,190)</u>	
Net Capital Assets		590,206

Some revenues in the governmental fund are deferred because  
they are not collected within the prescribed time period after year-  
end. On the accrual basis, however, those revenues would be  
recognized, regardless of when they are collected.

28,292

Total Net Position of Governmental Activities (Page 6)

\$ 1,363,564

The accompanying notes are an integral part of these financial statements.  
See Independent Auditors' Report.

**CLEARWATER UNDERGROUND WATER CONSERVATION DISTRICT  
STATEMENT OF ACTIVITIES AND GOVERNMENTAL FUNDS REVENUES, EXPENDITURES, AND  
CHANGES IN FUND BALANCE AND NET POSITION  
FOR THE YEAR ENDED SEPTEMBER 30, 2018**

	<u>Governmental Funds</u>		<u>Statement of Activities</u>
	<u>General Fund</u>	<u>Adjustments</u>	
<b><u>EXPENDITURES</u></b>			
Operations			
Director Fees	\$ 9,450	\$ -	\$ 9,450
Administrative	25,528	-	25,528
Compensation and Benefits	264,480	-	264,480
Depreciation	-	31,208	31,208
Facilities Costs	20,841	-	20,841
Clearwater Studies	123,472	-	123,472
Legal and Professional	41,330	-	41,330
Collection Fees	7,563	-	7,563
Advertising	4,459	-	4,459
Other Operating Expenditures (net of relevant contributions)	93,162	-	93,162
Capital Outlay	35,232	(35,232)	-
Total Expenditures	<u>625,517</u>	<u>(4,024)</u>	<u>621,493</u>
<b><u>REVENUES</u></b>			
General Revenues			
Property Taxes	684,759	7,924	692,683
Permits, Licenses, and Other Fees	6,689	-	6,689
Interest and Other Income	15,580	-	15,580
Total Revenues	<u>707,028</u>	<u>7,924</u>	<u>714,952</u>
Excess (Deficiency) of Revenues over Expenditures	81,511	11,948	93,459
Change in Fund Balance/Net Position	<u>81,511</u>	<u>11,948</u>	<u>93,459</u>
<b><u>NET POSITION</u></b>			
Adjustments to Fund Balance	-	(26)	(26)
Beginning of Year	<u>663,555</u>	<u>586,182</u>	<u>1,249,737</u>
Prior Period Adjustment	-	20,394	20,394
End of Year, as adjusted	<u>\$ 745,066</u>	<u>\$ 618,498</u>	<u>\$ 1,363,564</u>

The accompanying notes are an integral part of these financial statements.  
See Independent Auditors' Report.

**CLEARWATER UNDERGROUND WATER CONSERVATION DISTRICT  
 RECONCILIATION OF THE GOVERNMENTAL FUNDS REVENUES, EXPENDITURES, AND CHANGES IN  
 FUND BALANCE AND NET POSITION TO THE STATEMENT OF ACTIVITIES  
 FOR THE YEAR ENDED SEPTEMBER 30, 2018**

Net Change in Fund Balance - Total Governmental Funds (Page 8) \$ 81,511

The Change in Net Position Reported for Governmental Activities in the Statement of Activities is Different Because:

Governmental funds report capital outlays as expenditures. In the Statement of Activities the cost of those assets is allocated over their estimated useful lives and reported as depreciation expense.

Capital assets reported as capital outlay in governmental fund statements:	35,232	
Depreciation expense reported in statement of activities:	<u>(31,208)</u>	
Amount by which capital outlays are greater (less) than depreciation in current period.		4,024

Revenues in the statement of activities that do not provide current financial resources are not reported as revenue in the funds. This amount represents the net change in deferred inflows of resources from the previous period.		<u>7,924</u>
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Change in Net Position of Governmental Activities (Page 8) \$ 93,459

The accompanying notes are an integral part of these financial statements.  
 See Independent Auditors' Report.

**CLEARWATER UNDERGROUND WATER CONSERVATION DISTRICT  
NOTES TO THE BASIC FINANCIAL STATEMENTS  
YEAR ENDED SEPTEMBER 30, 2018**

**NOTE 1 – SIGNIFICANT ACCOUNTING POLICIES AND BASIS OF ACCOUNTING**

The basic financial statements of Clearwater Underground Water Conservation District (the District) have been prepared in conformity with accounting principles generally accepted in the United States of America (US GAAP) as applied to governmental units. The Governmental Accounting Standards Board (GASB) is the acceptable standard-setting body for establishing governmental accounting and financial reporting principles. The significant accounting principles and policies utilized by the District are described below:

**A. Reporting Entity**

The District was created in 1989 by resolution of the Commissioners Court of Bell County, Texas, pursuant to H.B. 3172, Chapter 524, Acts of the 71<sup>st</sup> Legislature (1989 Session) (the "Act"). The District is a governmental agency and a body politic and corporate, created by and acting pursuant to the Act as amended by S.B. 404, Chapter 22, Act of the 77<sup>th</sup> Legislature (2001 Session), S.B. 1755, Chapter 64, Act of the 81<sup>st</sup> Legislature (2009 Session), and by applicable law including the provisions of Chapters 36 and 49 of the *Texas Water Code*. A five-member group, which constitutes the Board of Directors, is the level of government which has responsibility over all related activities within the jurisdiction of the Clearwater Underground Water Conservation District. The District receives funding from local property taxes; certain well, pump, and transmission fees; and interest resulting from investments of excess funds.

The District is not included in any other governmental reporting entity. The taxpayers within the jurisdiction of the District elect the Board members. The Directors have decision-making authority, the power to designate management, the responsibility of operations, and the primary accountability of fiscal and fiduciary matters.

**B. Basis of Presentation**

The accounts of the District are organized on the basis of funds and account groups, each of which is considered a separate accounting entity. Operations of each fund are accounted for with a separate set of self-balancing accounts that comprise its assets, liabilities, fund equity, revenues, and expenditures, as appropriate. The government-wide financial statements report all the activities of the District. These activities are primarily supported by property taxes, license, registration, and other fees. The following are descriptions of the fund types and account groups used by the District.

**1. Governmental funds**

General Fund – All unrestricted financial resources except those required to be accounted for in another fund are recorded in the general fund. It is the District's general operating fund. Taxes and fees are the major sources of revenue. Expenditures include all costs associated with the daily operations of the District. There are no other governmental funds at this time.

**2. Account groups**

Capital Assets account group – All capital assets of the District are accounted for in this group. The account group is not a fund. It only measures financial position and is not involved with measurement of results of activities.

**C. Measurement Focus and Basis of Accounting**

The government-wide financial statements, statement of net position and statement of activities, are reported using the economic resources measurement focus and the accrual basis of accounting. Revenues are reported when earned and expenses are recorded when a liability is incurred, regardless of the timing of related cash flows. Grants and similar items are recognized as revenue as soon as all eligibility requirements imposed by the provider have been met.

Governmental fund financial statements are reported using the current financial resources measurement focus and the modified accrual basis of accounting. Revenues are considered to be available when they are collectible within the current period or soon enough thereafter to pay liabilities of the current period. For this purpose, the District does not consider revenues collected after its year-end to be available in the current fiscal period. Expenditures generally are recorded when a liability is incurred, as under accrual accounting. All other revenue items are considered measurable and available only when the District receives cash.

**CLEARWATER UNDERGROUND WATER CONSERVATION DISTRICT  
NOTES TO THE BASIC FINANCIAL STATEMENTS  
YEAR ENDED SEPTEMBER 30, 2018**

**D. Assets, Liabilities, Deferred Outflows/Inflows of Resources, and Net Position or Fund Balance**

**1. Cash and Cash Equivalents**

The District's cash and cash equivalents are considered to be cash on hand, demand deposits, and certificates of deposit.

**2. Budgets and Budgetary Accounting**

The adoption of an annual budget, for the general fund, is required prior to the beginning of each fiscal year on a basis consistent with accounting principles generally accepted in the United States of America. Thirty to sixty days prior to the beginning of each fiscal year, District management will submit a proposed budget for the fiscal year beginning on the following October 1<sup>st</sup>. The operating budget includes proposed expenditures and the means of financing them. After consideration the Board of Directors will adopt the budget by appropriate board action. Any revisions that alter the budget must also be considered and approved by board action.

**3. Accounts Receivable**

Accounts receivable are recorded at gross amount with uncollectable amounts recognized under the direct write-off method. No allowance for uncollectible accounts has been provided since it is believed that the amount of such allowance would not be material to the basic financial statements.

**4. Capital Assets**

Capital Assets have been acquired for general governmental purposes. Assets purchased or constructed are recorded as expenditures in the applicable governmental fund type and capitalized at historical cost in the Capital Asset account group. Contributed capital assets are recorded at estimated fair market value at the time received. Infrastructure assets are also included in the Capital Asset account group.

The full depreciation of the applicable capital assets is being recognized in compliance with the implementation of GASB Statement 34. Depreciation is calculated on the straight-line basis according to the following useful lives:

Building and Improvements	20 – 40 years
Office and Field Equipment	5 - 15 years

**5. Deferred Outflows/Inflows of Resources**

The District is compliant with GASB Statement No. 63, *Financial Reporting of Deferred Outflows of Resources, Deferred Inflows of Resources, and Net Position* and GASB Statement No. 65, *Items Previously Reported as Assets and Liabilities*. In addition to assets, the statement of net position will sometimes report a section for deferred outflow of resources. This separate financial statement element represents a consumption of net position that applies to a future period(s) and so will not be recognized as an outflow of resources (expenditures) until then. The District currently does not have any items that qualify for reporting in this category.

In addition to liabilities, the statement of net position will sometimes report a separate section for deferred inflows of resources. This separate financial statement element represents an acquisition of net position that applies to a future period(s) and so will not be recognized as an inflow of resources (revenue) until that time. The District has one type of item that qualifies for reporting in this category; delinquent property taxes. The amount of this item is deferred and will be recognized as an inflow of resources in the period the amount is collected and remitted to the District.

Prior Period Adjustment - An adjustment was required to the Statement of Net Position to remove the deferred inflow of resources. The Statement of Net Position is presented on the accrual basis of accounting and revenues are recognized regardless of when the cash is received. Therefore, amounts accrued as property taxes receivable that are still due after year-end would be recognized. The general fund balance sheet reports a deferred inflow of resources as it is presented on the current financial resources method and revenues are recognized when they are collectible within the current period. The net effect of the adjustment on the Statement of Net Position was to decrease the beginning net position balance by \$20,394 (the deferred inflow of resources reported in the prior period) for a net position total at September 30, 2018, of \$1,372,057.

**CLEARWATER UNDERGROUND WATER CONSERVATION DISTRICT  
NOTES TO THE BASIC FINANCIAL STATEMENTS  
YEAR ENDED SEPTEMBER 30, 2018**

**6. Equity Classifications**

In the government-wide financial statements, equity is shown as net position and classified into three components; Net Investment in Capital Assets, Restricted, and Unrestricted. The District uses two of these classifications.

- a. *Net Investment in Capital Assets* – Capital Assets, net of accumulated depreciation and reduced by any outstanding debt that poses an encumbrance.
- b. *Unrestricted* – All other assets that do not meet the definition of net investment in capital assets.

The District reports the governmental fund balance as, unassigned; not previously classed as:

*Non-spendable* – Amounts that cannot be spent because they are either not in a spendable form or, legally or contractually required to be maintained intact.

*Restricted* – Amounts with restrictions imposed externally by creditors, grantors, contributors, or laws or regulations of other governments, constitutional provisions or enabling legislation.

*Committed* – Amounts that can only be used for specific purposes and imposed by formal action of the board of directors.

*Assigned* – Amounts informally constrained by District management but not formally restricted by the board of directors.

**7. Risks, uncertainties, and use of estimates**

The preparation of financial statements in conformity with accounting principles generally accepted in the United States of America requires management to make estimates and assumptions that affect the reported amounts of assets and liabilities and disclosure of contingent assets and liabilities at the date of the financial statements and the reported amounts of revenue and expenditures during the reporting period. Actual results could differ from those estimates.

**NOTE 2 – PROPERTY TAXES**

Property taxes are levied October 1 on the assessed property value as of the prior January 1 for all real and business personal property located in the district in conformity with Subtitle E, Texas Property Tax Code. Taxes are due on receipt of the tax bill and are delinquent if not paid before February 1 of the year following the year in which imposed. On January 31 of each year, a tax lien attaches to property to secure the payment of all taxes, penalties, and interest ultimately imposed. The District's property taxes are billed and collected by the Tax Appraisal District of Bell County. Property tax revenues are considered available (1) when they become due or past due and receivable within the current period and (2) when they are expected to be collected during a 60-day period at the close of the District's fiscal year.

The net assessed value after adjustments, based on 100 percent of the assessed valuation of real and personal property within the District on the 2017 tax roll, was \$18,057,233,710. The 2017 tax rate of \$0.00385 per \$100 valuation was assessed and allocated to the General Fund. The resulting tax levy was \$ 695,203.

Deferred tax revenue is reported as deferred inflows of resources (Note 1.D.5 para 2) by the District on its Governmental Funds balance sheet under the General Fund and arises when potential revenue does not meet the "measurable" and "available" criteria for recognition in the current period. In subsequent periods, when both revenue recognition criteria are met, the liability for the deferred tax revenue is removed from the balance sheet and the revenue is recognized. The current Deferred Inflow of Resources is \$28,293.

**CLEARWATER UNDERGROUND WATER CONSERVATION DISTRICT**  
**NOTES TO THE BASIC FINANCIAL STATEMENTS**  
**YEAR ENDED SEPTEMBER 30, 2018**

**NOTE 3 – CHANGES IN CAPITAL ASSETS**

A summary of changes in capital assets is as follows:

2018	Primary Government			Ending Investment
	Beginning investment	Increase	Retirements	
Capital Assets not Depreciated				
Land	\$ 59,981	\$ -	\$ -	\$ 59,981
Total not Depreciated Capital Assets	59,981	-	-	59,981
Capital Assets Depreciated				
Land Improvements	19,000	-	-	19,000
Buildings	408,852	2,264	-	411,116
Monitor Wells	50,238	11,569	-	61,807
Mobile Classroom	76,990	13,699	-	90,689
Field Equipment	17,244	-	-	17,244
District Vehicles	6,920	-	-	6,920
Office Equipment	59,939	7,700	-	67,639
Total Depreciated	639,183	35,232	-	674,435
Total Capital Assets	699,164	35,232	-	734,396
Accumulated Depreciation	(112,982)	(31,208)	-	(144,190)
Net Investment in Capital Assets	\$ 586,182	\$ 4,024	\$ -	\$ 590,206

**NOTE 4 – CASH DEPOSITS AND INVESTMENTS WITH FINANCIAL INSTITUTIONS**

The District's checking deposits were fully covered by federal depository insurance and Texas Treasury Safekeeping Trust Company (TexPool) investments at September 30, 2018, were not covered by federal depository insurance or pledged securities. In accordance with GASB Statement No. 31, *Accounting and Reporting for Certain Investments and External Investment Pools*, the District reports all investments at fair value. The District's invested funds are invested with TexPool. The District categorizes its fair value measurements within the hierarchy established by generally accepted accounting principles. The hierarchy is based on the valuation inputs used to measure the fair value of the asset. Level 1 inputs are quoted prices in active markets for identical assets; Level 2 inputs are other observable inputs; and Level 3 inputs are unobservable inputs.

The District's cash and invested funds at September 30, 2018, were as follows:

	General Fund	Input Level
BancorpSouth		
Operating account	\$ 14,238	-
TexPool Accounts		
LGI Pool	368,272	2
Prime	370,959	2
Total TexPool accounts	739,231	
Total cash and invested funds	\$ 753,469	

**CLEARWATER UNDERGROUND WATER CONSERVATION DISTRICT  
NOTES TO THE BASIC FINANCIAL STATEMENTS  
YEAR ENDED SEPTEMBER 30, 2018**

**NOTE 4 – CASH DEPOSITS AND INVESTMENTS WITH FINANCIAL INSTITUTIONS (Continued)**

The market value for the above listed accounts is not materially different from the carrying value of the accounts.

**Policies, Governing Deposits and Investments**

The District has implemented an investment policy and is authorized, according to the *Public Funds Investment Act* (PFIA) (Government Code Chapter 2256), to invest any and all of its funds in certificates of deposit, direct debt securities of the United States of America or the State of Texas, fully collateralized repurchase agreements, certain types of commercial paper, certain types of municipal bonds and local government investment pools created under the Interlocal Cooperation Act, wherein all funds were invested as listed above.

In compliance with the Public Funds Investments Act, the District has adopted a deposit and investment policy where that policy addresses the following risks:

*Custodial Credit Risk – Deposits:* This is the risk that in the event of bank failure, the District's deposits may not be returned to it. The District was not exposed to custodial credit risk since deposits, in the bank during the year ended September 30, 2018, were covered by depository insurance.

*Custodial Credit Risk – Investments:* This is the risk that, in the event of the failure of the counterparty, the District will not be able to recover the value of its investments or collateral securities that are in the possession of an outside party. Investments are subject to custodial credit risk only if they are evidenced by securities that exist in physical or book entry form. Thus, positions in external investment pools are not subject to custodial credit risk because they are not evidenced by securities that exist in physical or book entry form.

**NOTE 5 – EMPLOYEE BENEFITS**

**A. Annual Leave**

Annual leave (vacation) is a benefit provided to eligible, full-time, employees of the District. A full-time employee is one who is regularly scheduled to work thirty to forty hours per week. Annual leave is accrued at eight hours per pay period immediately upon employment but cannot be taken until the employee has reached the one hundred eighty (180) day probationary period. The accrual maximum is twelve days for an employee with up to five years of continuous service. After five years, an employee is entitled to accrue an additional three days for a total of fifteen days per year. An employee may carry-over leave up to a maximum of twenty-four days per fiscal year. Remaining accrued leave is payable upon separation. Accrual at fiscal year-end was not material to these financial statements.

**B. Sick Leave**

A full-time employee, as previously defined, is entitled to six days per year. Accrual of sick leave is at four hours per pay period and a full-time employee can accumulate up to twelve days with carry-over. Upon termination of employment, no accumulated sick leave will be paid.

**C. Retirement Plan**

The District has established a Governmental 457 Deferred Compensation Plan as their retirement plan for full-time eligible employees. UMB Bank, N.A. is designated as trustee and Security Financial Resources, Inc. is the plan service provider. The District agrees to match employee contributions at 100% of the first 3% and 50% of the next 3% for a maximum match of up to 4.5% depending on the contribution of the employee. As of September 30, 2018, the employer match was \$ 8,230.

**NOTE 6 - SUBSEQUENT EVENTS**

District management has evaluated subsequent events as of February 11, 2019 the date the financial statements were available to be issued. No change to the financial statements for the fiscal year ending September 30, 2018 is deemed necessary as a result of this evaluation.



# ALTON D. THIELE, P.C.

CERTIFIED PUBLIC ACCOUNTANT

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BELTON, TX 76513-0808

## INDEPENDENT AUDITORS' REPORT ON COMPLIANCE AND ON INTERNAL CONTROL OVER FINANCIAL REPORTING BASED ON AN AUDIT OF FINANCIAL STATEMENTS PERFORMED IN ACCORDANCE WITH GOVERNMENT AUDITING STANDARDS

To the Board of Directors  
Clearwater Underground Water Conservation District  
Belton, Texas

We have audited, in accordance with auditing standards generally accepted in the United States of America and the standards applicable to financial audits contained in *Government Auditing Standards*, issued by the Comptroller General of the United States, the financial statements of governmental activities and the aggregate remaining fund balance information of Clearwater Underground Water Conservation District (the District) as of and for the year ended September 30, 2018, and the related notes to the financial statements, which collectively comprise the basic financial statements, and have issued our report thereon dated February 11, 2019.

### Internal Control Over Financial Reporting

In planning and performing our audit of the financial statements, we considered the District's internal control over financial reporting (internal control) to determine the audit procedures that are appropriate in the circumstances for the purpose of expressing our opinion on the financial statements, but not for the purpose of expressing an opinion on the effectiveness of the District's internal control. Accordingly, we do not express an opinion on the effectiveness of the District's internal control.

A *deficiency in internal control* exists when the design or operation of a control does not allow management or employees, in the normal course of performing their assigned functions, to prevent, or detect and correct, misstatements on a timely basis. A *material weakness* is a deficiency, or a combination of deficiencies, in internal control, such that there is a reasonable possibility that a material misstatement of the entity's financial statements will not be prevented, or detected and corrected on a timely basis. A *significant deficiency* is a deficiency, or a combination of deficiencies, in internal control that is less severe than a material weakness, yet important enough to merit attention by those charged with governance.

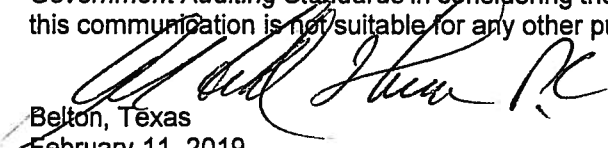
Our consideration of internal control was for the limited purpose described in the first paragraph of this section and was not designed to identify all deficiencies in internal control that might be material weaknesses or, significant deficiencies. Given these limitations, during our audit we did not identify any deficiencies in internal control that we consider to be material weaknesses. However, material weaknesses may exist that have not been identified.

### Compliance

As part of obtaining reasonable assurance about whether the District's financial statements are free of material misstatement, we performed tests of its compliance with certain provisions of laws, regulations, and contracts, noncompliance with which could have a direct and material effect on the determination of financial statement amounts. However, providing an opinion on compliance with those provisions was not an objective of our audit and, accordingly, we do not express such an opinion. The results of our tests disclosed no instances of noncompliance that are required to be reported under *Government Auditing Standards*.

### Purpose of this Report

The purpose of this report is solely to describe the scope of our testing of internal control and compliance and the results of that testing, and not to provide an opinion on the effectiveness of the entity's internal control or on compliance. This report is an integral part of an audit performed in accordance with *Government Auditing Standards* in considering the entity's internal control and compliance. Accordingly, this communication is not suitable for any other purpose.

  
Belton, Texas  
February 11, 2019

**REQUIRED SUPPLEMENTARY INFORMATION**

**CLEARWATER UNDERGROUND WATER CONSERVATION DISTRICT**  
**SCHEDULE OF REVENUES, EXPENDITURES AND CHANGES IN FUND BALANCE-BUDGET TO ACTUAL-**  
**GENERAL FUND**  
**FOR THE YEAR ENDED SEPTEMBER 30, 2018**

	<b>General Fund</b>			<b>Variance Favorable (Unfavorable)</b>
	<b>Original Budget</b>	<b>Final Budget</b>	<b>Actual</b>	
<b>REVENUES</b>				
Property taxes	\$ 701,520	\$ 701,520	\$ 684,759	\$ (16,761)
Application fee	20,000	20,000	5,600	(14,400)
Transport fee	1,000	1,000	1,089	89
Interest	2,000	2,000	15,580	13,580
Other income (expense)	-	-	-	-
<b>Total revenues</b>	<b>724,520</b>	<b>724,520</b>	<b>707,028</b>	<b>(17,492)</b>
<b>EXPENDITURES</b>				
Administrative expenses	71,019	72,528	48,588	23,940
Compensation and benefits	253,006	270,279	264,480	5,799
Clearwater studies	185,020	185,020	135,041	49,979
Educational outreach/marketing	30,000	30,000	21,007	8,993
Spring flow gage	16,000	16,000	15,450	550
Computer systems	45,000	45,000	38,096	6,904
Legal fees	39,600	41,330	41,330	-
Reserve for uncollected taxes	20,000	16,761	-	16,761
Other operating expenses (net)	39,400	39,400	34,421	4,979
Capital expenditures	-	4,000	3,999	1
Facility costs	17,075	17,075	15,548	1,527
Utilities	8,400	8,400	7,557	843
<b>Total expenditures</b>	<b>724,520</b>	<b>745,793</b>	<b>625,517</b>	<b>120,276</b>
Excess (deficiency) of revenues over expenditures	-	(21,273)	81,511	102,784
<b>OTHER REVENUE</b>				
Reserve funds for health insurance	-	17,273	-	17,273
Reserve for equipment	-	4,000	-	4,000
<b>Total other revenue</b>	<b>-</b>	<b>21,273</b>	<b>-</b>	<b>21,273</b>
Change in fund balance	-	-	81,511	81,511
<b>FUND BALANCE</b>				
Beginning of fiscal year			663,555	
End of fiscal year			745,066	

**SUPPLEMENTAL INFORMATION**

**CLEARWATER UNDERGROUND WATER CONSERVATION DISTRICT  
INDEX OF SUPPLEMENTAL SCHEDULES INCLUDED IN THIS REPORT  
SEPTEMBER 30, 2018**

<b>Title of Schedule</b>	<b>Pg.</b>
Schedule of General Fund Expenditures	18
Schedule of Temporary Investments	19
Analysis of Taxes Levied and Receivable	20
Schedule of Board Members, Key Personnel, and Consultants	21

**CLEARWATER UNDERGROUND WATER CONSERVATION DISTRICT  
 SCHEDULE OF GENERAL FUND EXPENDITURES  
 FOR THE YEAR ENDED SEPTEMBER 30, 2018**

Current		
Compensation and benefits	\$	264,480
(Number of persons employed by the District: 4 - Full-time)		
Professional Services		
Auditing		6,600
Legal		34,730
Clearwater studies		123,472
Utilities		7,557
Facility costs		13,284
Administrative expenses (including director fees)		34,978
Capital outlay		
Acquisition of capital assets		35,232
Net loss of capital assets (theft)		-
Educational outreach/marketing		11,307
Computer systems		30,396
Other operating expenses		63,481
Other expenditures		-
		<hr/>
TOTAL	\$	<u>625,517</u> (see page 8)
Depreciation	\$	<u>31,208</u>

**CLEARWATER UNDERGROUND WATER CONSERVATION DISTRICT  
 SCHEDULE OF TEMPORARY INVESTMENTS  
 FOR THE YEAR ENDED SEPTEMBER 30, 2018**

<b>Governmental Funds</b>	<b>Pool / Type</b>	<b>Interest Rate</b>	<b>Maturity Date</b>	<b>Balance at End of Year</b>
<b>General Fund</b>				
<b>Local Government</b>				
<b>Investment Pools</b>				
TexPool	449	2.1244%	Demand	\$ 368,272
TexPool - Prime	590	2.3072%	Demand	<u>370,959</u>
TOTAL				<u>739,231</u>
<b>Other accounts</b>				
First State Bank of Central Texas -				
Operations Account	Transaction	N/A	Demand	<u>14,238</u>
TOTAL				<u>14,238</u>
<b>TOTAL ALL ACCOUNTS</b>				<u><u>\$ 753,469</u></u>

**CLEARWATER UNDERGROUND WATER CONSERVATION DISTRICT  
ANALYSIS OF TAXES LEVIED AND RECEIVABLE  
FOR THE YEAR ENDED SEPTEMBER 30, 2018**

	Maintenance Taxes
Taxes receivable at October 1, 2017	\$ 20,369
2017 Original tax roll, net of adjustments	692,683
Total to be accounted for	713,052

Tax Collections:	
Current year	(673,631)
Prior years	(11,128)
Total collections	(684,759)

Taxes receivable, September 30, 2018	\$ 28,293
--------------------------------------	-----------

Taxes receivable by years:	
2011 and years prior to	\$ 4,945
2012	1,055
2013	1,297
2014	1,517
2015	3,767
2016	5,869
2017	9,843

Taxes receivable, September 30, 2018	\$ 28,293
--------------------------------------	-----------

	2017	2016	2015
Property Valuations	\$ 18,057,233,710	\$ 17,063,799,755	\$ 16,526,207,088

Tax rates per \$100 valuation:

Debt service tax rates	N/A	N/A	N/A
Maintenance tax rates	0.00385	0.00392	0.00395
Total tax rates per \$100 valuation:	0.00385	0.00392	0.00395

Gross Original tax levy	\$ 695,203	\$ 668,901	\$ 652,785
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Percent of taxes collected to taxes levied**	98.50%	102.37%	98.15%
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\*\* Calculated as taxes collected from current and previous years divided by the original tax levy.



**CLEARWATER UNDERGROUND WATER CONSERVATION DISTRICT  
SCHEDULE OF BOARD MEMBERS, CONSULTANTS, AND KEY PERSONNEL  
SEPTEMBER 30, 2018**

Complete District Mailing Address: PO Box 1989, Belton, TX 76513

District Business Telephone Number: (254) 933-0120

Submission Date of the most recent District Registration Form: N/A  
(TWC Sections 36.054 and 49.054)

Limit on Fees of Office that a Director may receive during a fiscal year: \$9,000  
(TWC Section 36.060) Fee: \$150 per day while on District business

Name and addresses	Precinct and Terms of Office 4-year terms	Fees Paid as of 09/30/2018	Expense Reimbursement	Title as of 09/30/2018	Property owner within the District
<b><u>Board Members</u></b>					
Leland Gersbach 7872 Hackberry Holland, TX 76534	Precinct 1 2016 to 2020	Waived	-	President	Yes
Gary Young 1314 Creek View, Salado, TX 76571	Precinct 2 Dec. 2014 to 2018	\$2,400	\$176	Director	Yes
Wallace Biskup PO Box 265 Troy, TX 76579	Precinct 3 2016 to 2020	\$1,050	-	Vice President	Yes
Judy Parker 1235 River Ridge Ranch Rd. Killeen, TX 76549	Precinct 4 Resigned 2018	\$3,300	\$5	Secretary	Yes
Scott Brooks 425 Mercy Ranch Rd. Florence, TX 76527	Precinct 4 Appointed 2018	-	-	Director	Yes
David Cole 2401 Brown Circle Killeen, TX 76543	At-Large 2014 to 2018	\$2,700	\$175	Director	Yes
<b><u>Consultants</u></b>					
Lloyd Gosselink Attorneys at Law 816 Congress Ave Suite 1900 Austin, TX 78701-4071	N/A	\$49,428	N/A	Attorney	N/A
Alton D Thiele, P.C. P.O. Box 808 Belton, TX 76513	N/A	\$6,600	N/A	Auditor	N/A
<b><u>Key Personnel</u></b>					
Dirk Aaron	N/A	\$77,900		District Manager	
Shelly Chapman	N/A	\$46,986		District Administrative Assistant	

**CLEARWATER UNDERGROUND WATER CONSERVATION DISTRICT**  
**COMMUNICATIONS WITH THOSE CHARGED WITH GOVERNANCE**  
**SEPTEMBER 30, 2018**

***ALTON D. THIELE, P.C.***  
**CERTIFIED PUBLIC ACCOUNTANT**  
**300 E. AVENUE C**  
**P.O. BOX 808**  
**BELTON, TX 76513-0808**

# ***ALTON D. THIELE, P.C.***

**Certified Public Accountant  
300 East Avenue C  
P. O. Box 808  
Belton, Texas 76513-0808**

February 11, 2019

To the Board of Directors  
Clearwater Underground Water Conservation District  
700 Kennedy Ct.  
PO Box 1989  
Belton, TX 76513

We have audited the basic financial statements of Clearwater Underground Water Conservation District (the District) as of and for the year ended September 30, 2018. Professional standards require that we provide you with information about our responsibilities under generally accepted auditing standards and *Government Auditing Standards*, as well as certain information related to the planned scope and timing of our audit. We have communicated such information in our letter dated June 22, 2018. Professional standards also require that we communicate to you the following information related to our audit.

## Significant Audit Findings

### *Qualitative Aspects of Accounting Practices*

Management is responsible for the selection and use of appropriate accounting policies. The significant accounting policies used by Clearwater Underground Water Conservation District are described in NOTE 1 to the financial statements. The application of existing policies was not changed during the fiscal year ended September 30, 2018. We noted no transactions entered into by the District during the year for which there is a lack of authoritative guidance or consensus. All significant transactions, we are aware of, have been recognized in the financial statements in the proper period.

Accounting estimates are an integral part of the financial statements prepared by management and are based on management's knowledge and experience about past and current events and assumptions about future events. Certain accounting estimates are particularly sensitive because of their significance to the financial statements and because of the possibility that future events affecting them may differ significantly from those expected. The two most sensitive estimates affecting the financial statements were:

Management's estimate of the useful lives of its capital assets is significant due to the very nature of determining how long an item might last. We evaluated the key factors and assumptions used to develop these estimates in determining that it is reasonable in relation to the financial statements taken as a whole.

Management's estimate of the budget of the District is significant due to the changing needs of the district and the changing property tax base within the District boundaries. We evaluated the key factors and assumptions used to develop these estimates in determining their reasonableness in relation to the financial statements taken as a whole.

Certain financial statement disclosures are particularly sensitive because of their significance to financial statement users. The most sensitive disclosure affecting the financial statements was:

The disclosure of the expense of the compensation and benefits since this expense is estimated to be over one third of the total annual budget comparatively.

The financial statement disclosures are neutral, consistent, and clear.

### *Difficulties Encountered in Performing the Audit*

We encountered no significant difficulties in dealing with management in performing and completing our audit

*Corrected and Uncorrected Misstatements*

Professional standards require us to accumulate all known and likely misstatements identified during the audit, other than those that are trivial, and communicate them to the appropriate level of management. Management has corrected all such misstatements. In addition, none of the misstatements detected as a result of audit procedures and corrected by management were material, either individually or in the aggregate, to the financial statements taken as a whole.

*Disagreements with Management*

For purposes of this letter, professional standards define a disagreement with management as a financial accounting, reporting or auditing matter, whether or not resolved to our satisfaction that could be significant to the financial statements or the auditor's report. We are pleased to report that no such disagreements arose during the course of our audit.

*Management Representations*

We have requested certain representations from management that are included in the Management Representation Letter dated February 11, 2019.

*Management Consultations with Other Independent Accountants*

In some cases, management may decide to consult with other accountants about auditing and accounting matters, similar to obtaining a "second opinion" on certain situations. If a consultation involves application of an accounting principle to the District's financial statements or a determination of the type of auditor's opinion that may be expressed on those statements, our professional standards require the consulting accountant to check with us to determine that the consultant has all the relevant facts. To our knowledge, there were no such consultations with other accountants.

*Other Audit Findings or Issues*

We generally discuss a variety of matters, including the application of accounting principles and auditing standards, with management each year prior to retention as the District's auditors. However, these discussions occurred in the normal course of our professional relationship and our responses were not a condition of retention.

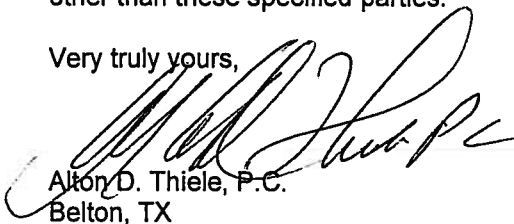
One issue of note pertains to the District's investment in TexPool. While TexPool complies implicitly with the Texas Public Funds Investment Act, TexPool still disclaims the security of funds invested with the entity as subject to loss. The District has a fiduciary responsibility to safeguard the public funds it receives. Governmental Investment Pools are not subject to the custodial risk provision as stated in the *Notes to the Financial Statements*, page 14; however, the risk of loss still exists.

Other Matters

With respect to the supplementary information accompanying the financial statements, we made certain inquiries of management and evaluated the form, content, and methods of preparing the information to determine that the information complies with accounting principles generally accepted in the United States of America, the method of preparing it has not changed from the prior period, and the information is appropriate and complete in relation to our audit of the financial statements. We compared and reconciled the supplementary information to the underlying accounting records used to prepare the financial statements or to the financial statements themselves.

This information is intended solely for the use of the Board of Directors and Management of Clearwater Underground Water Conservation District and is not intended to be, and should not be, used by anyone other than these specified parties.

Very truly yours,



Alton D. Thiele, P.C.  
Belton, TX

# *Appendix C*

## Well Registration Totals

Year	Exempt Wells		Non-Exempt Wells			Monitor Wells		Total
	Grandfathered	New	Grandfathered	Class 1	Class 2	Water	Envr	
<b>2002-2017</b>	4117	935	104	26	44	21	37	<b>5284</b>
<b>2018 Jan</b>	0	6	0	1	1	0	0	<b>8</b>
<b>Feb</b>	1	7	0	0	0	0	0	<b>8</b>
<b>Mar</b>	2	3	0	1	0	0	0	<b>6</b>
<b>Apr</b>	1	7	0	1	0	0	0	<b>9</b>
<b>May</b>	2	6	0	0	0	0	0	<b>8</b>
<b>June</b>	1	5	0	0	0	0	0	<b>6</b>
<b>July</b>	1	7	0	0	0	0	0	<b>8</b>
<b>Aug</b>	1	5	0	0	0	0	0	<b>6</b>
<b>Sept</b>	2	0	0	0	0	0	0	<b>2</b>
<b>Oct</b>	**34	0	0	0	0	0	0	<b>34</b>
<b>Nov</b>	2	4	0	1	0	0	0	<b>7</b>
<b>Dec</b>	9	3	0	0	0	0	0	<b>12</b>
<b>Total 2018</b>	<b>56</b>	<b>53</b>	<b>0</b>	<b>4</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>114</b>
<b>Totals</b>	<b>4173</b>	<b>988</b>	<b>104</b>	<b>30</b>	<b>45</b>	<b>21</b>	<b>37</b>	<b>5398</b>

## Adjustments

Adjustment Type	Exempt Wells		Non-Exempt Wells			Monitor Wells		Total
	Grandfathered	New	Grandfathered	Class 1	Class 2	Water	Envr	
<b>2002-Present</b>	<b>4173</b>	<b>988</b>	<b>104</b>	<b>30</b>	<b>45</b>	<b>21</b>	<b>37</b>	<b>5398</b>
Never Drilled	N/A	-24	N/A	-3	-4	0	0	-31
Plugged	-135	-31	-13	-1	-1	-2	-15	-198
<b>Totals</b>	<b>4038</b>	<b>933</b>	<b>91</b>	<b>26</b>	<b>40</b>	<b>19</b>	<b>22</b>	<b>5169</b>

**\*\*REVISED WELL COUNTY - In October 2018, Field Tech located 31 old well driller logs that did not have registered wells in the CUWCD database. These wells are now registered with a designation of "GU" (grandfathered/unregistered).**

# *Appendix D*







**Non-Exempt Wells--Other**

Acre-Feet

2018 Monthly Production (gallons)

File No.	State #	Name	Hist. Permit	Oper. Permit	Total Permit	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	YTD	YTD ac-ft	% Permit
N2-11-001G		Bradley Ware	0.00	160.00	160.00	2,085,449	1,531,502	1,531,501	2,867,493	2,118,034	2,965,248	4,561,919	5,734,985	1,955,108	749,457	944,969	1,922,522	28,968,187	88.90	55.56%
N2-11-002G		Bradley B. Ware				1,564,087	944,969	1,042,724	2,183,205	1,596,672	2,052,864	3,291,099	4,301,239	1,433,746	586,532	684,288	1,564,086	21,245,511	65.20	40.75%
		Bradley B. Ware				521,362	586,533	488,777	684,288	521,362	912,384	1,270,820	1,433,746	521,362	162,925	280,681	358,436	7,722,676	23.70	14.81%
<b>Not Aggregated</b>																				
N2-07-014P		Barking Oaks	0.62	0.62	0.62	6,126	6,258	6,189	6,523	6,148	6,258	6,528	6,498	6,125	6,050	5,980	5,690	74,373	0.23	37.10%
N2-07-013G		D.R. Dorsey Properties	2.47	2.47	2.47	0	0	0	0	0	0	0	259	244	20	9	178	710	0.00	0.00%
N2-10-007P		Goode Towing	0.05	0.05	0.05	0	0	0	0	0	0	0	0	10	0	0	0	10	0.00	0.00%
N2-08-005G		Lone Star Paving	1.07	1.07	1.07	3,290	193	194	123	196	236	239	212	129	1,990	1,070	161	8,033	0.02	1.87%
N1-16-004P		Michael Maples	0.39	0.39	0.39	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00	0.00%
N2-14-001G		Mikesta	100.00	100.00	100.00	0	0	0	0	0	8,146,286	6,517,029	6,517,029	0	0	0	0	21,180,344	65.00	65.00%
N2-06-007G		Misty Creek HOA	6.45	6.45	6.45	17,050	17,000	17,500	15,500	12,000	14,500	14,500	14,200	14,500	11,800	14,700	15,800	179,050	0.55	8.53%
N1-11-001P		Roy Rodriguez	0.55	0.55	0.55	15,000	15,000	15,000	15,000	15,000	15,000	15,000	15,000	15,000	15,000	15,000	15,000	180,000	0.55	100.00%
N1-04-001P		Stephen Spinn	0.56	0.56	0.56	15,207	15,207	15,207	15,207	15,207	15,207	15,207	15,207	15,207	15,207	15,207	15,207	182,484	0.56	100.00%
N2-16-001P		Strike 3 Bail Bonds	0.12	0.12	0.12	620	590	548	670	768	630	520	680	480	475	520	370	6,871	0.02	16.67%
N2-08-007G		Trio Investments	0.18	0.18	0.18	700	700	200	200	200	2,500	300	200	200	200	200	100	5,700	0.02	11.11%
N1-16-007P		Wells Fargo Bank	0.79	0.79	0.79	21,390	21,390	21,390	21,390	21,390	21,390	21,390	21,390	21,390	21,390	21,390	21,390	256,680	0.79	100.00%
<b>Strasburger Farms</b>																				
N2-02-030G		Strasburger Farms (#10)	271.80	33.84	305.64	0	0	0	0	30,270,000	35,004,000	0	0	0	0	0	0	65,274,000	200.32	65.54%
N2-02-031G		Strasburger Farms (#11)				0	0	0	0	0	0	0	0	0	0	0	0	0	0.00	0.00%
N2-02-032G		Strasburger Farms (#15)				0	0	0	0	11,784,000	14,160,000	0	0	0	0	0	0	25,944,000	79.62	26.05%
N2-02-033G		Strasburger Farms (#16)				0	0	0	0	0	0	0	0	0	0	0	0	0	0.00	0.00%
N2-18-001P		Strasburger Farms (#2)				0	0	0	0	13,014,000	15,984,000	0	0	0	0	0	0	28,998,000	88.99	29.12%
N2-02-027G		Strasburger Farms (#4)				0	0	0	0	0	0	0	0	0	0	0	0	0	0.00	0.00%
N2-12-002P		Strasburger Farms (#5)				0	0	0	0	5,472,000	4,860,000	0	0	0	0	0	0	10,332,000	31.71	10.37%
N2-02-029G		Strasburger Farms (#6)				0	0	0	0	0	0	0	0	0	0	0	0	0	0.00	0.00%
<b>Totals:</b>						271.80	307.09	578.89	2,942,106	32,458,943	46,191,255	11,152,632	12,325,660	2,028,393	821,589	1,019,045	1,996,418	116,316,442	356.96	61.66%

# *Appendix E*

## Clearwater UWCD Summary of Exempt Well Use Through December 2018

Aquifer	Total Number of Registered Exempt Wells	Registered Number of Domestic Wells	Estimated Domestic Gallons/Day	Estimated Domestic Use Ac-ft/Year	Registered Number of Stock Wells	Estimated Stock Use Gallons/Day	Estimated Stock Use Ac-ft/Year	Total Estimated Use Gallons/Day	Total Estimated Exempt Well Use Ac-ft/Year
Glen Rose (Upper Trinity)	543	439	132,157	148	104	66,560	75	198,717	223
Hensell (Middle Trinity)	711	663	199,590	224	48	30,720	34	230,310	258
Hosson (Lower Trinity)	130	118	35,523	40	12	7,680	9	43,203	48
<b>Trinity (Total)</b>	<b>1,384</b>	<b>1,220</b>	<b>367,269</b>	<b>411</b>	<b>164</b>	<b>104,960</b>	<b>118</b>	<b>472,229</b>	<b>529</b>
Edwards BFZ	809	675	346,282	388	134	85,760	96	432,042	484
Edwards Equivalent	371	282	84,893	95	89	56,960	64	141,853	159
Buda	32	19	5,720	6	13	8,320	9	14,040	16
Lake Waco	8	3	903	1	5	3,200	4	4,103	5
Ausfin Chalk	234	146	43,952	49	88	56,320	63	100,272	112
Ozan	166	117	35,222	39	49	31,360	35	66,582	75
Pecan Gap	67	44	13,246	15	23	14,720	16	27,966	31
Kemp	15	11	3,311	4	4	2,560	3	5,871	7
Alluvium	574	367	110,482	124	207	132,480	148	242,962	272
<b>Other</b>	<b>1,467</b>	<b>989</b>	<b>297,729</b>	<b>333</b>	<b>478</b>	<b>305,920</b>	<b>343</b>	<b>603,649</b>	<b>676</b>
<b>CUWCD Total</b>	<b>3,660</b>	<b>2,884</b>	<b>1,011,279</b>	<b>1,133</b>	<b>776</b>	<b>496,640</b>	<b>556</b>	<b>1,507,919</b>	<b>1,689</b>

Domestic use estimate assumes 106 gallons/person per day (USGS estimate of domestic use outside of a municipal water system) and 2.84 persons/household (U.S. Census - Bell County average 2016)

Exempt well use estimate factors out all plugged, capped, monitor and inactive wells in the database.

Source of stock water estimates is Texas Agrilife Extension @ 18 gallons water per day per cow.

Livestock water use estimates are based on the 2011 TWDB Water Use Survey Historical Summary Estimates by County as of 12/26/13.

Trinity Aquifer wells registered with unknown depth are assigned to the Middle Trinity per Board decision.

The total registered exempt wells include all domestic wells, livestock wells, inactive wells and monitor wells with exempt status.

The other designation is the total of minor aquifer and alluvium source designation of the exempt wells.



# *Appendix F*

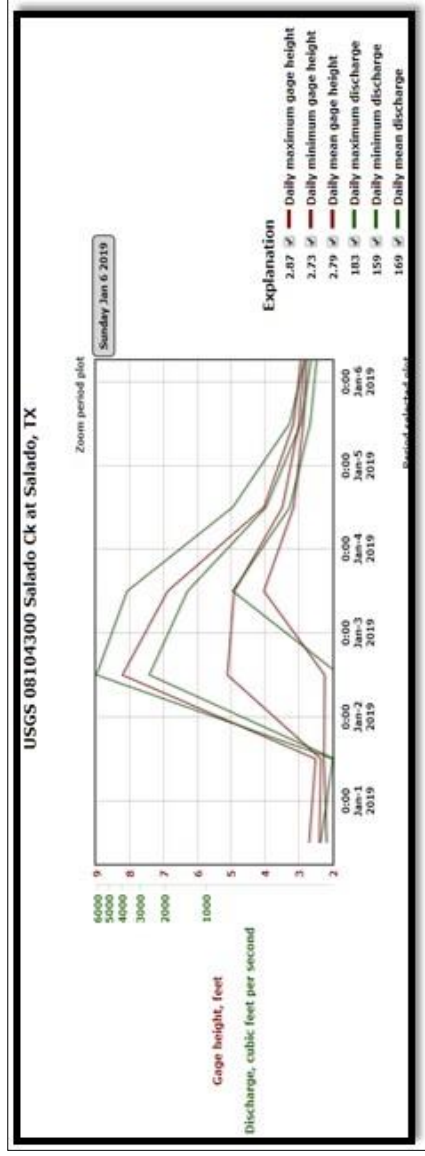
# Edwards (BFZ) Aquifer Status Report – January 2019

<u>DFC Analysis Over Time</u> (2000-Present) <i>Modeled Available Groundwater</i>		<u>HEUP and OP Permit Analysis</u> <i>Relative to the Modeled Available Groundwater</i>			<u>2018 YTD Prod.</u> Jan - Dec <b>2077.86 Ac-ft</b> <b>82.79%</b>	<u>Pending Applications</u>		<u>Exempt Well Reservations</u>		
DFC Adopted * Minimum Spring Flow	Status of DFC ** Current / Low	MAG *** Ac-ft	HEUP Ac-ft	OP Ac-ft	Total Permitted Ac-ft	Available for Permitting Ac-ft	Pending Applications Ac-ft	Exempt Well Reservation Ac-ft	Exempt Well Use Estimation Ac-ft	Available Exempt Use Ac-ft
<b>Edwards (BFZ) Aquifer</b>	<b>100 Ac-ft</b> per month or <b>1.68 cfs</b>	<b>124661.31</b> <b>Ac-ft</b> 1/6/2019 vs <b>220 Ac-ft</b> 08/20/2014	2209.7	300.12	<b>2509.82</b>	<b>3134.18</b>	<b>0</b>	825	453	372

\*Desired Future Conditions (DFC) established by Clearwater UWCD and approved by GMA8 and TWBD, is the description of how the aquifer should look in the future (50 years based on maintaining the Salado Spring Complex discharge during a repeat of drought conditions similar to the drought of record in the 1950's, under drought of record, a five-day average of discharge amounting to 200 ac-ft-month is preferred and 100 ac-ft-/month is the minimum acceptable spring flow. Spring flow is measured and estimated by the USGS Gage in Salado Creek located below the Salado Creek Spring Complex.

\*\*Status of the DFC is the estimated spring flow over a five-day average from the springs releasing artesian pressure from the Edwards BFZ Aquifer expressed as acre feet per month of spring flow into Salado Creek.

\*\*\*The Modeled Available Groundwater (MAG) is the estimated amount of water available for permitting assigned to Clearwater UWCD by the Executive Administrator of TWDB, based on the desired future conditions.



CFS is measured continuously at the downstream gage with USGS developing the rating curve according to industry standards and maintaining the information for public access on the USGS website.

5 - day average for January 1<sup>st</sup> – January 6<sup>th</sup> was 2,095 CFS = 124,661.31 ac-ft/month

5 - day average for December 6<sup>th</sup> – December 10<sup>th</sup> was 681.36 CFS = 40,543.79 ac-ft/month

## Trinity Aquifer Status Report – January 2019

<u>DFC Analysis Over Time</u> (2000-Present) Modeled Available Groundwater		<u>MAG</u> ** Ac-ft		<u>HEUP and OP Permit Analysis</u> Relative to the Modeled Available Groundwater			<u>2018 YTD</u> Total Prod. Jan-Dec <b>1484.77 Ac-ft</b> <b>33.02%</b>		<u>Pending Applications</u>		<u>Exempt Well Reservations</u>			
				DFC Adopted * Average Drawdown (by layer)	Current	Proposed	HEUP Ac-ft (by layer)	OP Ac-ft (by layer)	Total Permitted Ac-ft (by layer)	2017 Actual Prod. (by layer)	2018 YTD Prod. (by layer)	Available for Permitting Ac-ft (by layer)	Pending Applications Ac-ft (by layer)	Exempt Well Reserve Ac-ft (by layer)
Trinity Aquifer (by layer)														
Pawluxy	NA	96	0	0	0	0	0	0	0	0	0	0	0	0
Glen Rose (upper)	-3.1 ft/yr -155 ft/50 yrs	880	974	61.9	70.15	132.05	58.59	50.47	54.95	0	693	223	470	470
Hensell (middle)	-5.72 ft/yr -286 ft/50 yrs	1099	1099	259.3	207.46	466.76	80.14	87.41	84.24	0	548	243	305	305
Hosston (lower)	-6.38 ft/yr -319 ft/50 yrs	4993	7193	1181.4	2715.88	3897.28	871.48	1346.89	917.72	*** 1952.8	178	49	129	129
<b>Total</b>		<b>7068</b>	<b>9266</b>	<b>1502.6</b>	<b>2993.49</b>	<b>4496.09</b>	<b>1010.21</b> (22.23%)	<b>1484.77</b>	<b>1152.91</b>	<b>1952.8</b>	<b>1419</b>	<b>514</b>	<b>904</b>	<b>904</b>

\*Desired Future Conditions (DFC) is the description of how the aquifer should look in the future (50 years).

\*\*The Modeled Available Groundwater (MAG) is the estimated amount of water available for permitting assigned to Clearwater UWCD by the Executive Administrator of TWDB.

\*\*\*Pending applications in the Hosston Layer (Lower)

City of Troy Drilling Permit Well #2 (250 ac-ft/yr)

Trinity Oasis LLC Operating Permit N2-13-002P (1702.8 ac-ft/yr) (this permit amount not reflected in Trinity Aquifer total permit amount; production contingent on TCEQ approval and plant construction)

# *Appendix G*



# Clearwater Source

Clearwater Underground Water Conservation District

www.cuwcd.org

2018 Annual Newsletter

| October 2018

| Volume 14, Issue 1

## PIONEERS OF THE DISTRICT RETIRE

Clearwater UWCD has been governed by elected men and woman from across the county since 2002. Their guiding principles have been to "Protect the groundwater across Bell County so that it is available to future generations, while at the same time protecting property rights". To accomplish this, citizens have historically elected board members who understand the county, foster accountability of the staff, invest their time in knowledge and are committed to making the hard decisions. Two of those long-term directors have recently resigned from the board for two different reasons.

Wallace Biskup, Director Precinct 3, has served on the board for 20 years.

He was first appointed by the Bell County Commissioners Court in June of 1999. He has been elected and subsequently re-elected to the board by the citizens of Precinct 3 for 5 consecutive terms. He served as the board secretary from 1999 to 2002, then elected by the other board members to be Vice President starting in 2002. He has held that position up until his recent resignation on October 10, 2018. Wallace Biskup has a storied history of serving the northeast area of Bell County and the City of Troy with distinction since the early 1960's. He served on the Troy City Council for 20 years

and was appointed City Judge in 1981. His water expertise and leadership skills were first fostered by him serving as a director on the Elm Creek Watershed Authority for 16 years as their secretary. Wallace has owned Biskup Blacksmith and Welding Service in the Seaton Community of East Bell County, first with his father and now his son Wallace Biskup Jr.



Wallace Biskup, Director 1999-2018, Conservationist, Gentleman, Statesman.

Judy Parker, Director Precinct 4, has served on the board for 16 years. She was first elected in 2002 for four consecutive 4-year terms of office. Prior to that she served as an advisor to the initial board of directors. Judy has served as board secretary since 2011 as well as represented Bell County on the Groundwater Management Area 8 and the Brazos Region G State Water Planning Committee. She is known for her conservative mindset and property rights protections as she stood up for groundwater management.



Judy Parker, Director 2002 - 2018, teaching youth about groundwater management is her greatest passion.

Board President, Leland Gersbach, stated "We the Directors and staff of Clearwater will sincerely miss the passion, understanding and discernment of complex groundwater issues by both Wallace Biskup and Judy Parker. They are truly statesmen and peace makers in protecting property rights and our precious resource in Bell County. Their role in establishing Clearwater as a model single county district cannot be overlooked."

These storied leaders will be formally recognized at the upcoming 18<sup>th</sup> Annual Bell County Water Symposium in Killeen on November 15, 2018.

## "BELL COUNTY, WE HAVE A PROBLEM..."

As the newest Director on your Board, I wanted to explain why I ran for this position, and in doing so, I hope to bring to light a problem that is growing urgent in Bell County. First, my story...

In late 2008, my wife, Stefanie, and I purchased a recently-built home on a little piece of property near Youngsport. Being a rural property, our water source is a private well. One day in early August 2012, Stefanie turned the kitchen faucet on to get some water, and nothing came out! Our well was dry. Our well driller was consulted, and it was determined that the water level in our well had dropped below the pump. In fact, in the 5 years since our well was drilled, the level of water had dropped an astonishing 88 feet!

Thus, began my long trip down the road that led me to run for the Precinct 4 Director position. My "regular job" is as the Director of Engineering for a civil engineering firm in Killeen, and in that role, I've dealt with water wells for many years and have interacted with Clearwater staff on various projects over the years.

In the six years since lowering our well pump, I've read technical documents, talked to several groundwater experts, and attended numerous events in order to learn everything I can about groundwater. As a side note, I highly recommend the upcoming Bell County Water Symposium, having attended several in previous years. All this research revealed that the availability of groundwater in my neck of the woods (southwestern Bell County) is going to disappear for many residents in coming years if actions are not taken to better share this valuable resource.

Many groundwater experts believe that a big factor in the dropping well level is unlimited pumping from the aquifers in neighboring counties where there are no entities to monitor and limit pumping to sustainable rates. We on the District Board will be investigating ways to continue to protect this valuable resource as the explosive population growth in central Texas continues, and we need the help of all well owners in the District.



How can you, a well owner, help us? Your Board has invested wisely in scientific data collection for many years. Data is needed in order to make good decisions – bad (or lack of) data leads to bad decisions! We need data on wells affected by the falling water levels in order to determine how bad the problem is, and how rapidly it is worsening. If you've had to lower your well pump or dig a deeper well in recent years, we'd like to hear from you. If you know a neighbor who's had similar issues, encourage them to let us know. Please call the District office and share your story with our excellent staff. By gathering data on affected wells, we hope to manage a growing problem before it's too late. Thanks for your help and may the water in your well rise up to greet you!

Scott Brooks, P.E., Director, Pct. 4  
Clearwater UWCD

### BOARD OF DIRECTORS

Leland Gersbach - Precinct 1  
2013-2018 (President)

Wallace Biskup - Precinct 3  
2013-2018 (Vice President)

Gary Young - Precinct 2  
2014-2018 (Director)

Scott Brooks - Precinct 4  
2018 (Director)

David Cole - At large  
2013-2018 (Director)

### MISSION STATEMENT

To implement an efficient, economical, and environmentally sound groundwater management program to protect and enhance the water resources of the District.

### WATER QUALITY SCREENING

The District's in-house lab offers registered well owners free screening for common constituents and bacteria. Annual screening is recommended.

# BAYLOR UNIVERSITY STUDENT RESEARCH CONFIRMS DISTRICT MANAGEMENT STRATEGY

A Middle Trinity aquifer study by Baylor University student, Jim Tucker, provided evidence to support well completion strategies presently applied by the Clearwater Underground Water Conservation District (CUWCD) to protect water quality. The Middle Trinity aquifer is an important water resource in Bell County that is under stress from population growth and industrial use within the region. In addition, the Middle Trinity aquifer has variable water quality in parts of Bell County (see Figure 1, right).

Jim focused his study on the Hensell formation of the Middle Trinity aquifer and potential influences from the overlying Glen Rose Formation. The Hensell, a sandy formation, is the major water bearing unit in the aquifer. The Glen Rose Formation, a limestone unit that contains water in fractures, lies above the Hensell

Formation. Reviewing historical data from the Texas Water Development Board (TWDB), Jim found that water quality differed between the two for-

mations with the total dissolved solids (TDS) increasing upward from the Hensell to the Glen Rose. Jim also sampled wells during his study which supported the TWDB data. The best water quality (lowest TDS) occurred in wells screened only in the Hensell Formation and effectively sealed off from the overlying Glen Rose Formation. Wells screened in both the Hensell and the Glen Rose formation typically contained water of intermediate TDS levels suggesting a blend between the Glen Rose and Hensell water quality (see Figure 2 below.).

The CUWCD currently has specific well completion requirements for the Middle Trinity aquifer in the area of concern and research results confirmed the need for special well completion techniques in North-Central Bell County. The CUWCD rules appear well placed to protect the water quality.

The primary constituent contributing to the increased TDS content is sulfate (SO<sub>4</sub>) and is probably related to gypsum minerals in the Glen Rose formation, but reasoning for the localized area of high concentrations is not completely understood. Higher head pressures occur in the Glen Rose formation, and differential pressures appear to be greater in the area of poorer water quality possibly causing water to migrate down from the Glen Rose toward the Hensell. One proposed hypothesis involves increased head pressure through leakage from the local reservoirs (Belton and Stillhouse) over the last 50 years. The increased head pressures make it difficult to seal wells effectively requiring special rules to protect the aquifer quality. To further answer some of these questions, Baylor University is currently undertaking a new study examining reservoir effects on the Edwards aquifer. This study is on track to be completed by the end of the 2018 and may provide insight into similar situations in the Middle Trinity aquifer. For more information on the research conducted by Jim Tucker, a summary slide presentation and a copy of his thesis are available on the CUWCD website.

Tucker, James J., IV, 2018, A hydrologic assessment of water chemistry and aquifer properties in the Middle Trinity aquifer in Bell and McLennan Counties in Texas, Unpublished master's thesis, Baylor University, Waco, Texas, 68 p.

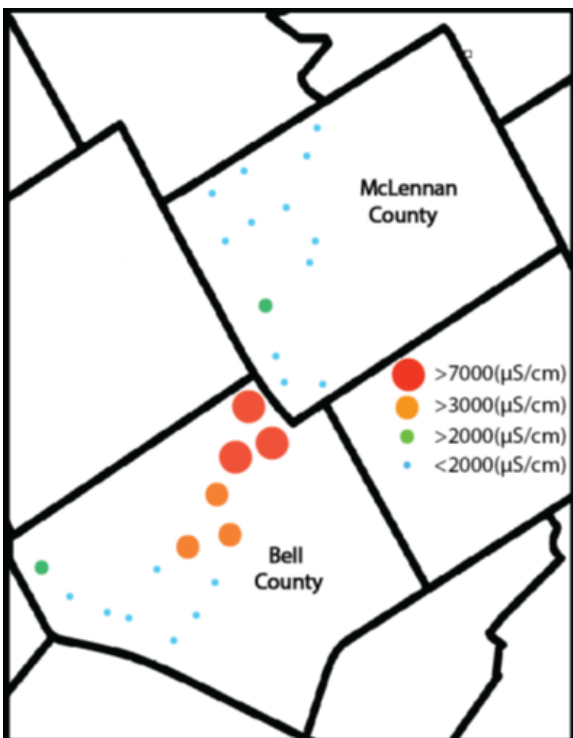


Figure 1. Specific conductance levels in Middle Trinity aquifer wells sampled in Bell and McLennan Counties, showing levels of concern in North-Central Bell County. The specific conductance is an indicator of the total dissolved solids (TDS) in the water and a general indicator of salinity (Tucker, 2018).

Joe C. Yelderman Jr. Ph. D., P.G. #2941—Hydrogeology Professor, Baylor University

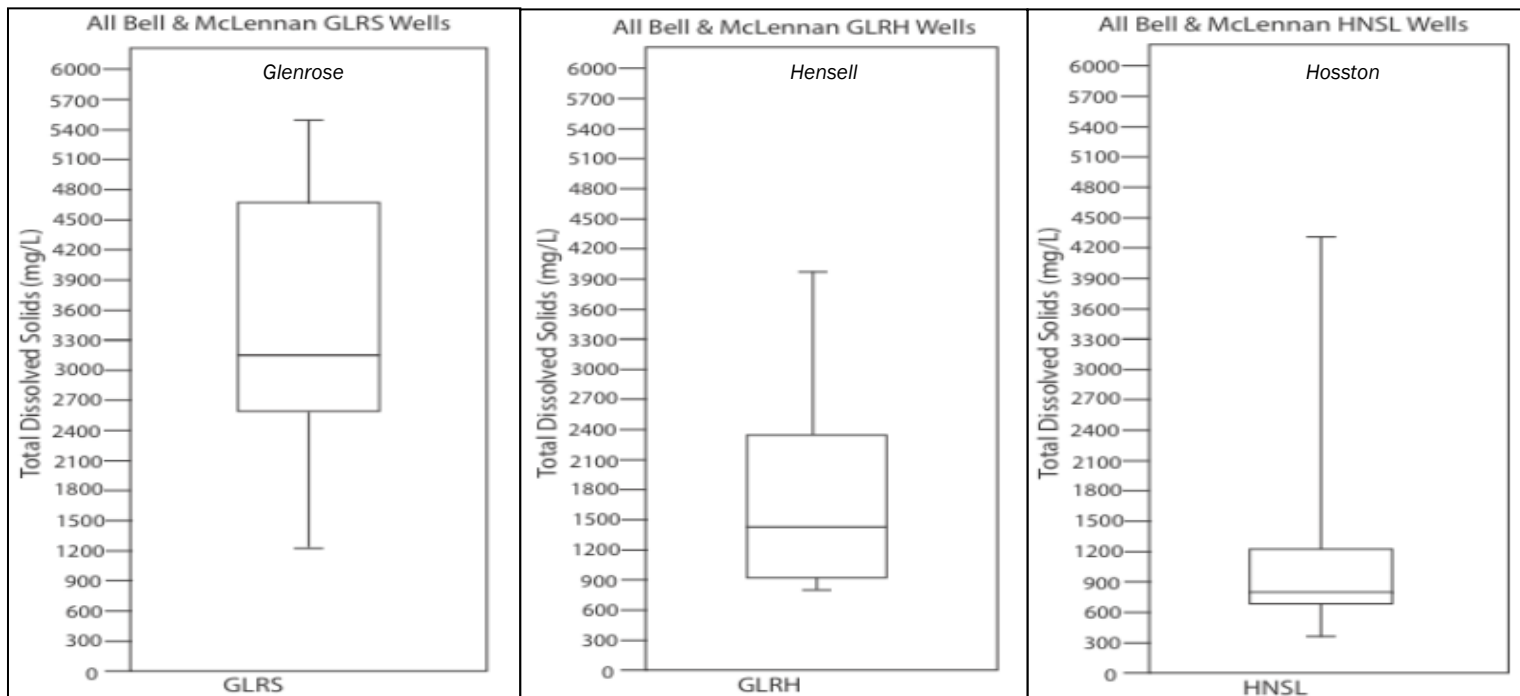


Figure 2. Mean total dissolved solids (TDS) values are highest in wells screened solely in the Glen Rose (GLRS) shown on the left. Intermediate levels occur in wells screened in both formations (GLRH) and the lowest values shown on the right occur in wells screened only in the Hensell (HNSL) (Tucker, 2018).

# IN-DEPTH REVIEW OF GROUNDWATER CONDITIONS IN SOUTHWEST REGION OF BELL AND WILLIAMSON COUNTIES

Amidst citizen outcries and concerns related to groundwater drawdowns in southern Bell County and northern Williamson County, Clearwater UWCD has funded a repeat study petitioned by the district in 2014. The previous study and current study were based on a diligent effort to understand aquifer conditions of the Hensell Layer of the Trinity Aquifer, which underlies both Bell and Williamson Counties. Both studies followed serious drought conditions and a perception that well owners don't understand the fragile nature of the Trinity Aquifer. This layer of the aquifer is a valuable resource key to the rural areas of both counties yet managed in Bell and not Williamson County.

Recently in response to proposed mining operations in northern Williamson County, several landowners in both counties reached out to the District to better understand Trinity Aquifer conditions and how the pumping by the mine operators may affect their wells. To assess the current conditions of the aquifer, LRE Water, LLC, was hired by Clearwater to analyze changes in water levels in the Hensell Layer (Middle) of the Trinity Aquifer. In addition, LRE was asked to expand the evaluation to include an assessment of the water level conditions for the Hosston Layer (Lower) of the Trinity Aquifer.

To say the least, the analysis and formal report document the alarming conditions that are impacting groundwater's future in both Counties. Mike Keester, Professional Geoscientist with LRE Water, LLC, conducted the analysis while previously working for LBG-Guyton & Associates and now with LRE Water, LLC. He has provided a formal report with maps to Clearwater in early October of this year. His findings and conclusions can be found on CUWCD's website at <http://www.cuwcd.org/aquifer-science/trinity-aquifer/>.

The following is a shortened summary of the newest analysis from the 2018 report authored by Keester, LRE Water, LLC.

**Keester States:** "For the Middle Trinity Aquifer, the pattern of the water levels has not changed significantly from previous investigations. To the north of the study area, water levels are lower indicating a cone of depression extending toward McLennan County (see map titled: "Middle Trinity Aquifer Water Level Elevation - 2018"). This pattern is expected due to the historical groundwater production from the Trinity Aquifer north of Bell County.

Review of the drawdown map for the Middle Trinity Aquifer illustrates that though there is a cone of depression north of the study area, the largest recent water level declines are located in the central and southern portions of the study area (see Figure 1 below). Since 2006, water levels in the Middle Trinity have declined by 200 feet or more toward the Sun City area in Williamson County. Near the city of Florence, the water level declines are greater than 100 feet and are more than 140 feet in much of the area. Within Bell County, the Hidden Springs area to the west of Salado has experienced similar water level declines as those observed in northern Williamson County. The declines in these area since 2006 indicate average Middle Trinity Aquifer water level declines in much of the area exceed 10 feet per year.

The final Middle Trinity Aquifer map indicates that in much of the study area the water levels are near the top of the aquifer (see map titled: "Middle Trinity Aquifer Available Drawdown - 2018"). For example, near Florence water levels are less the 100 feet above the top of the aquifer and less than 50 feet above the top toward Sun City. Similar conditions are evident near the Stillman Valley area in Bell County. These low available drawdown levels mean that well owners will have increased difficulty accessing necessary quantities of groundwater."

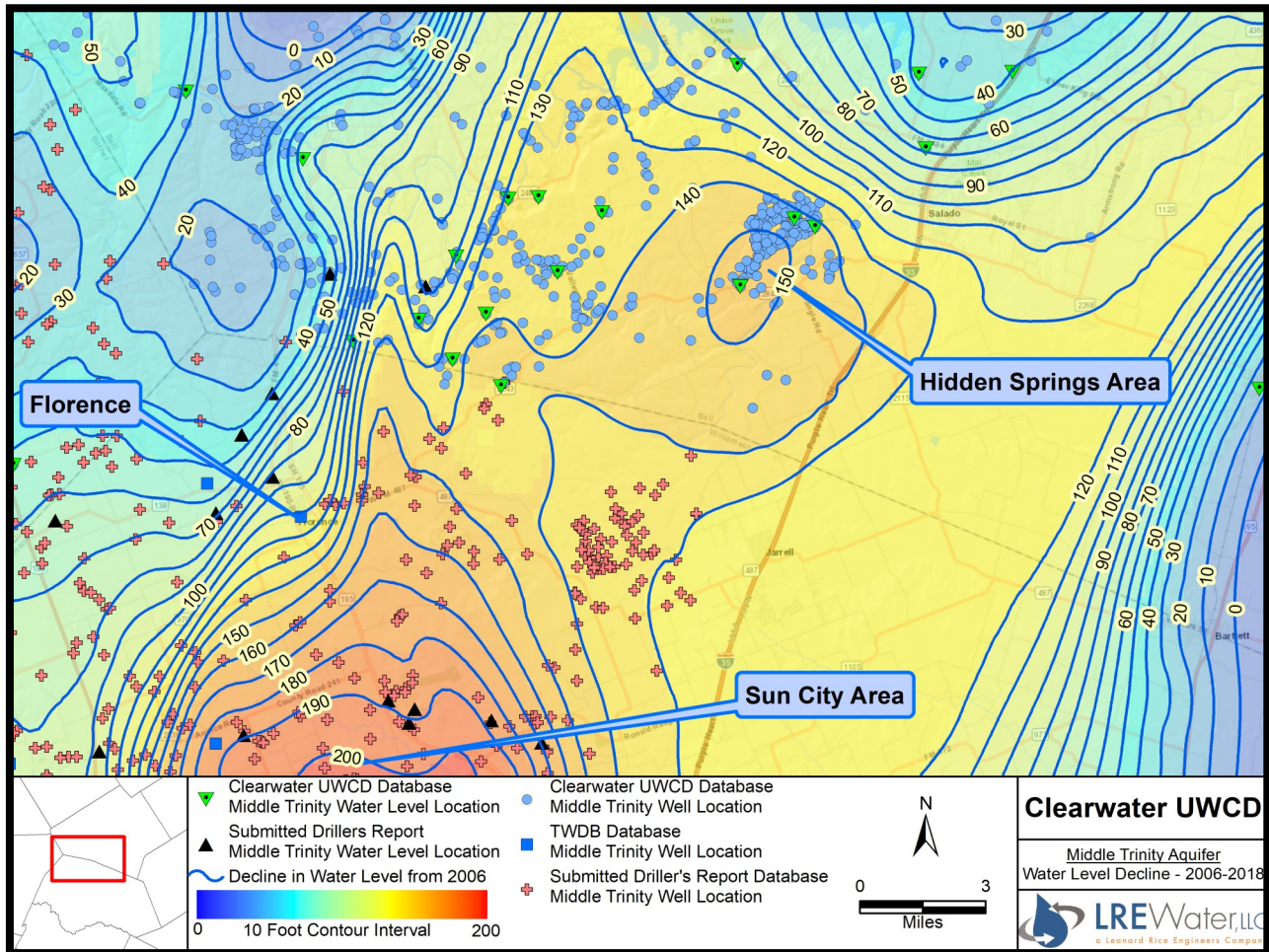


Figure 1: "Middle Trinity Aquifer Water Level Decline - 2006-2018"

(continued on page

(continued from page 3)

Keester in the following references his evaluation of the Lower Trinity Aquifer:

“Like the Middle Trinity Aquifer, to the north of the study area, water levels are lower indicating a cone of depression extending toward McLennan County (see map titled: “Lower Trinity Aquifer Water Level Elevation – 2018”). However, for the Lower Trinity, the cone of depression is broader and better defined. This pattern is expected due to the historically high production from the Trinity Aquifer north of Bell County.

Review of the drawdown maps for the Lower Trinity Aquifer illustrates the largest recent water level declines are located in the northern and southern portions of the study area (see Figure 2 below). Since 2006, water levels in the Lower Trinity have declined by 100 feet or more in northern Williamson County and in the northern portion of the study area in Bell County. The declines in Bell County are likely influenced primarily by the groundwater production in McLennan County. The declines in Williamson County are more likely caused by local groundwater production as the smaller declines in southern Bell County suggest that Williamson County is somewhat isolated from the regional water level declines occurring north of the study area.

Looking back at the declines since 2010, we see that near the Sun City area the declines are greater since 2010 than they were from 2006 (see map titled: “Lower Trinity Aquifer Water Level Decline – 2010-2018”). The greater declines over the shorter period of time indicates that water levels were recovering (that is, rising higher) from 2006 to 2010, but groundwater production since 2010 has likely increased causing a rapid decline in water levels. In most other areas, the water level declines appear to have remained fairly consistent or slowed to some extent.

In contrast to the Middle Trinity Aquifer, the available drawdown map for the Lower Trinity Aquifer map indicates water levels are typically well above the top of the aquifer (see map titled: “Lower Trinity Aquifer Available Drawdown – 2018”). The only area where water levels appear to be nearing the top of the aquifer is in the far western portion of the District. However, with the apparent rapid water level declines in Williamson County, the available drawdown values would correspondingly decline which is becoming evident around Florence. For a copy of the full report and maps, go to: <http://www.cuwcd.org/aquifer-science/trinity-aquifer/>.

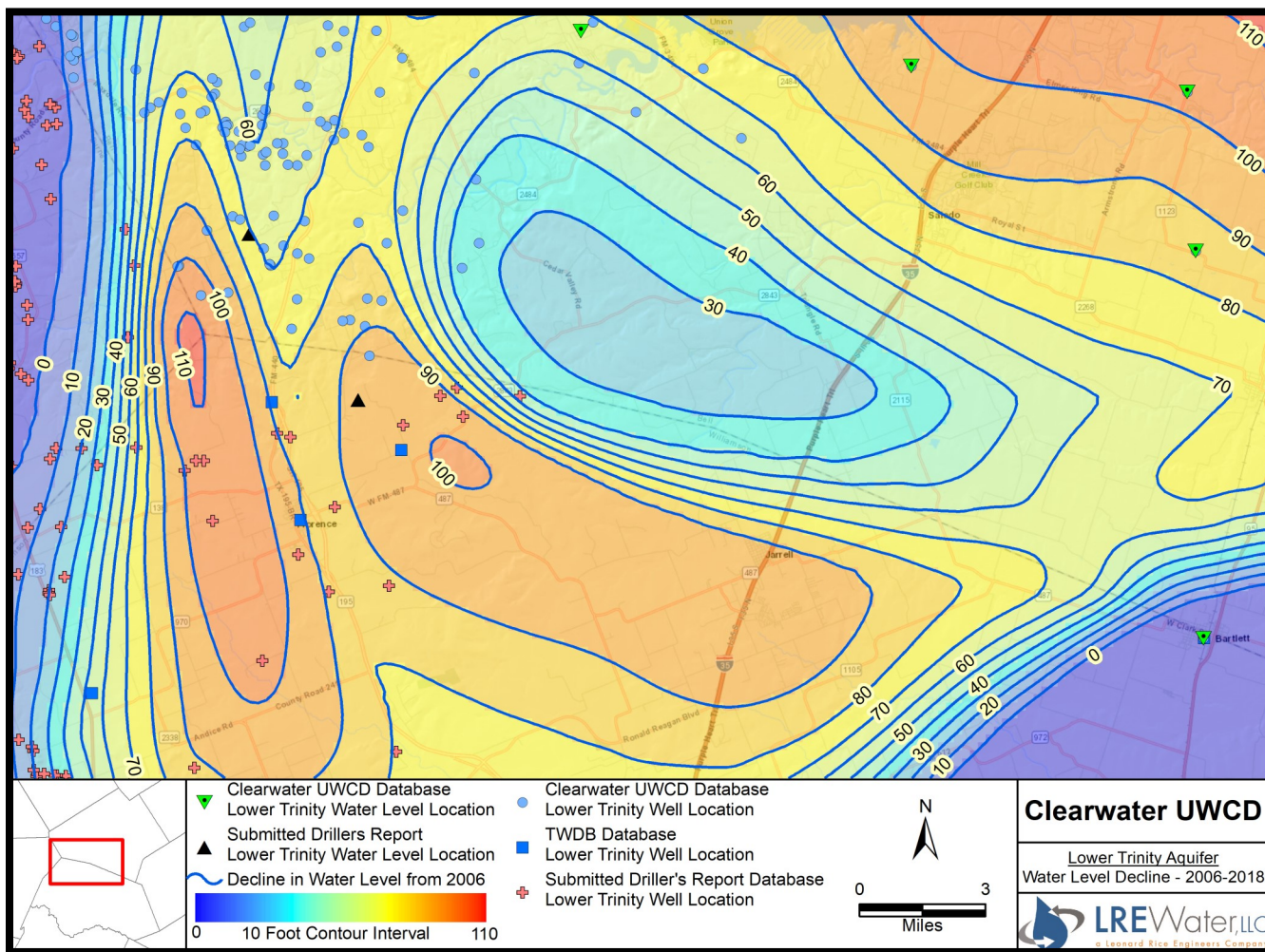


Figure 2: “Lower Trinity Aquifer Water Level Decline – 2006 - 2018”

**In closing, Clearwater’s assessment provides insight of the need for the following:**

1. Groundwater Management is needed in Williamson County, but an assessment by the Texas Water Development Board of the former “Report 350” due to the rapid pace of developments and groundwater demands.
2. Increase in conservation by rural groundwater users in Bell County is needed based on declines in and around rural communities such as Hidden Springs.
3. Expansion of rural public water supplies is a necessity for growth in Southwest Bell County.
4. Expansion of Rainwater Harvesting and use coupled with inclusion of these options into formal architectural designs of custom homes and businesses.

# Groundwater Conservation Districts

## FAQs



### What is a Groundwater Conservation District?

GCDs are political subdivisions of the state created to protect and balance private groundwater interests with the conservation, preservation, protection, recharging, and prevention of waste of groundwater, and the control of subsidence caused by withdrawal.

### What does a GCD do?

- Establish rules for the spacing and drilling of all water wells
- Consider and permit non-exempt water wells
- Maintain records of non-exempt wells in a district
- Submit management plans to Texas Water Development Board for approval
- Collaborate regionally in joint planning for the establishment of DFCs
- Collect water level and water quality data on aquifers
- Educate stakeholders on water conservation
- Work to prevent harm to the aquifer due to pumping or contamination



### How do GCDs allocate their budgets?



Education & Outreach



Science & Research



Operations



Conservation



Regional Planning

### How many GCDs are there in Texas?

Currently, there are **98** GCDs plus 2 subsidence districts.

### What rules must a GCD follow?

GCDs are governed by Chapter 36 of the Texas Water Code. As political subdivisions of the state, they are also subject to Chapter 49 of the Texas Administrative Code. Based on the rules established by the State, each GCD creates policies to accomplish the goals of their District.

### Do I have to register my well with my GCD?



Yes, state law requires all wells to be registered with the GCD. This does not mean that all wells require a permit. All domestic wells and livestock wells that produce less than 25,000 gallons per day are exempt from permits. A GCD has the ability to exempt others in their rules.

## More GCD FAQs

### What is a management plan?

A management plan outlines a GCD's goals and course of action to achieve those goals. The management plan is submitted to TWDB for approval, and rules necessary to implement the management plan are adopted by each district.

### What is a Desired Future Condition?

The desired future condition is a metric that is established during the joint planning process by GCDs in a common Groundwater Management Area (GMA). The DFCs provide for consistency in groundwater management in the GMA and a balance between groundwater protection and production.

### How are GCDs funded?

GCDs are funded through property taxes, permitting fees and/or usage fees.

## Groundwater Terms

### Aquifer

An underground geological formation able to store and yield water in useable amounts. Aquifers in Texas can consist of sand, gravel, limestone, granite, and many other rock types that have pores or spaces for water to pass through.

### Aquitard

An aquitard, or confining layer, is a zone within the earth that restricts the flow of groundwater.

### Total Dissolved Solids (TDS)

TDS refers to the total concentration of dissolved constituents in solution. A TDS level of less than 1000 ppm is often considered freshwater, although many Texans' drinking water has a higher TDS.

### Cone of Depression

A cone of depression is a conically shaped area of decreased water level (or pressure) that occurs when water is withdrawn from an aquifer. If wells are too close to each other, these cones may overlap and cause interference resulting in abnormally low water levels in those wells. In areas that withdraw more water than is recharged or flows to that area, a semi-permanent regional cone of depression may occur.

## Abandoned Wells & Water Quality

There is a high environmental risk associated with abandoned or deteriorated wells, as they are a direct conduit from the surface to our groundwater resources. Because of this risk, it is highly recommended to have abandoned or deteriorated wells plugged. Some GCDs have established programs to assist landowners in plugging abandoned wells.

### How often should I have my well water tested?

It is recommended that well owners have their water professionally tested annually or when an observed change in water quality occurs.

### Who can disinfect my well water?

It is recommend to contact a licensed water well driller or a pump installer to professionally disinfect your well.

## SALADO SALAMANDER UPDATE FOR 2018

After three and a half years of monitoring at the springs in the Salado area, we have gathered more information about the Salado salamander, *Eurycea chisholmensis*, than over the last eighteen years since its description. Last year, we were able to get a glimpse of the population dynamics of these salamanders and their habitat associations using a three year data set with observations of over seventy salamanders. Working in collaboration with Dr. Chris Nice from Texas State University, this year we have finalized the collection of genetic material from the known range of this species and will examine the population genetics using the largest data set yet compiled of over 150 Salado salamanders. This study will examine how genes are moving in the system which highlights the degree of population isolation or connectivity, the size of each individual population, and the unique genetic pattern at each site which will aid in conservation. We now know that these salamanders and the ecosystem that they live in thrives in the groundwater of Bell County. So if you see us at the springs, come over and say hello. We may even have a salamander to show you.



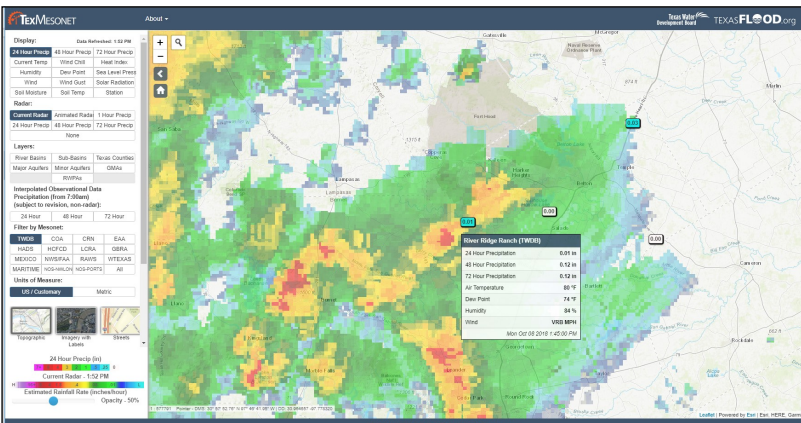
**Pete Diaz**, Aquatic Biologist  
U.S.Fish and Wildlife Service



## TEXMESONET IN BELL COUNTY

Clearwater is a key partner with the Texas Water Development Board and the governor's initiative to create a weather system across Texas. Clearwater with the Bell County Commissioners Court will add five new real time weather stations to Bell County. The first four are in place, one is south of Killeen in the Maxdale Community, one is in the City of Troy, one is located on the property of Central Texas Water Supply Corporation at Lake Stillhouse and the most recent is located at the City of Rogers in east Bell County.

The link to the TexMesonet Site is <https://www.texmesonet.org/Overview> This statewide earth observation network, known as TexMesonet, delivers near-real-time, quality data to forecasters, modelers, and the general public while managing quality assurance, quality control and metadata for partner networks. Because of local agreements with cooperators and support from the Bell County Commissioners Court, the state this summer installed the first four advanced weather stations Bell County. To learn more about this project, go to <https://www.texmesonet.org/>



## Join the District for the 18<sup>th</sup> Annual Bell County Water Symposium

**November 15, 2018 8:00 A.M. --- 4:00P.M.**  
**Texas A&M University - Central Texas**

**\*\*This event is free but requires RSVP by November 9th\*\***

### Program at a Glance

### **“Understanding the Importance of Water in Today’s Future”**

#### Key Note Address

*Dr. Charles Porter*, Professor at St. Edward’s University, Author, and popular speaker on Texas Water Rights. Dr. Porter provides an energetic persona on Water. He will capture your attention as he expresses his deep appreciation of Texas and our historical dependence on both groundwater and surface water systems. He recently published his newest book *“Sharing the Common Pool: Water Rights in the Everyday Lives of Texans”*.

#### Legal Experts will Provide

Case Law Updates on Groundwater Issues  
Update on the TCEQ PGMA Process  
Looking Back at the Legislature while moving forward on Water Issues

#### Update on the Brazos River Basin in Central Texas

*Brad Brunnet*, Lower & Central Basin Regional Manager  
Brazos River Authority

#### Update on Groundwater Science, Tools, Uses and Aquifer Conditions in Bell County

Experts from Baylor University, United States Geological Survey, US Fish & Wildlife Service, and Clearwater UWCD.

#### What is the TexMesonet? Realtime Weather Watching

*Dr. Leyon Greene*, Hydrologist & Meteorologist, TexMesonet  
Texas Water Development Board

#### Update from TWDB

*Larry French, P.G.*, Texas Water Development Board

### Event Sponsors

Clearwater UWCD

LRE Water, LLC

HALFF Associates

Lloyd-Gosselink Attorneys at Law

Bell County Engineers Office

Texas AgriLife Extension Service

Texas A&M University - Central Texas



P.O. Box 1989  
Belton, TX 76513



## THE MANAGER'S COMMENTS

Clearwater Underground Water Conservation District has set the 18<sup>th</sup> Annual Water Bell County Water Symposium for November 15, 2018 in Killeen at the campus of Texas A&M University - Central Texas. The theme of this year's event is "Understanding the Importance of Groundwater and Surface Water". We have continued our annual event by focusing our efforts with Texas AgriLife Extension Service in Bell County, the Bell County Engineers Office and the Bell County Commissioners Court.

Our Keynote Address at noon will be by Dr. Charles Porter, Author and Professor and popular speaker on Texas Water Rights. Dr. Porter is a professor St. Edwards University in Austin, Texas and provides an energetic persona on water. He will capture your attention as he expresses his deep appreciation of Texas and our historical dependence on both groundwater and surface water systems. He recently published his newest book "Sharing the Common Pool: Water Rights in the Everyday Lives of Texans".

I found his newest book to be available on Amazon.com. I was intrigued by the online introduction. Dr. Porter says, "If all the people, municipalities, agencies, businesses, power plants, and other entities that think they have a right to the water in Texas actually tried to exercise those rights, there would not be enough water to satisfy all claims, no matter how legitimate". He explains in the simplest possible terms who has rights to the water in Texas, who determines who has those rights, and who benefits or suffers because of it.

Dr. Porter will further explain the origins of Texas Water Law. His book looks at the elements of the state's Spanish, English, and Republic heritages,

that have contributed to the development of our system that defines water by where it sits, flows, or falls and assigns its ownership accordingly. He will frame up a deeper understanding of water and our challenges as population growth abounds!

We also have the following topics planned:

1. Who and What is the Texas Water Development Board?
2. History of Groundwater Conservation Districts.
3. What is the Impact of Groundwater Use in Bell and Williamson Counties?
4. Updates on Recent Case Law Pertaining to Groundwater Permitting.
5. What Should We Expect in the Next Legislative Session on Water?
6. Realtime Weather Stations Installed Across Bell County.
7. What is the Status of Our Aquifer System in Bell County?
8. What is an Aquifer Test and What is the So What?

We will highlight our day with a special recognition of some stakeholders and longtime leaders from across the County who have been significant in our forward progress since the drought of the 1950's and the most recent challenges of the past few years. The Board of Directors of Clearwater UWCD look forward to another year of showcasing the importance of water to our robust economy.



**Dirk Aaron**, General Manager  
Clearwater UWCD

## INNOVATIVE PERMITTING FOR BENEFICIAL USE AND AQUIFER MANAGEMENT

In 2014 Central Texas Water Supply Corporation (CTWSC) submitted drilling permit applications for two public water supply wells to be completed in the Lower Trinity Aquifer. Within the applications, CTWSC indicated that the anticipated aggregate operating permit application for the two wells would be for 2,421 acre-feet per year (AFY). While understanding CTWSC's ownership of the groundwater beneath their properties, Clearwater Underground Water Conservation District (CUWCD) also needed to assess the potential operating permit the amount "necessary for beneficial use during the permit term" (District Rule 5.2). CUWCD did not want CTWSC to invest in wells and infrastructure with an unwarranted expectation for an operating permit.

To assess CTWSC's potential demand for beneficial use, the District conducted a needs assessment by considering CTWSC's projected customer demands through the year 2045. The District conducted the assessment through 2045 understanding the realities of long-term planning and financing associated with the investment by CTWSC. However, rather than 2,421 AFY, the District's assessment identified only 1,579 AFY of potential long-term demand.

Following completion of the first production well in 2015, CTWSC applied for 726 AFY of groundwater production. As the amount was less than one-half of the projected long-term demand identified by the District, the CUWCD Board issued the operating permit in September 2015. The issuance of the permit left 853 AFY of identified potential long-term demand remaining.

The District did an excellent job in their role of vetting the initial application to assess the potential beneficial use and convey the expectation to the applicant. CTWSC understood that it was up to them to demonstrate

that the potential groundwater demand from current and potential customers was greater than identified by the District if they desired an aggregated operating permit of 2,421 AFY.

In June 2017, CTWSC submitted additional analyses that were consistent with CUWCD's 2014 analysis, but expanded on potential population growth, per capita water demands, and drought planning criteria. The results showed that for long-term planning CTWSC's groundwater demand ranged from 2,416 to 3,569 AFY by 2050. Tied to population projections, the projected demand increased with increasing population.

Based on their analyses, CTWSC submitted a revised operating permit application for a long-term amount of 2,421 AFY. However, recognizing the District's mandate to manage the groundwater resources in Bell County, CTWSC proposed permit conditions that would allow the amount to increase over time. CUWCD accepted the concept of an operating permit with growth provisions and worked with CTWSC to develop special conditions that tie growth of the permit amount to adoption of and compliance with aquifer desired future conditions.

The permit conditions developed collaboratively with the applicant created an innovative solution benefiting both the District and CTWSC. CTWSC receives the benefit of certainty in an operating permit amount and duration, based on meeting defined aquifer conditions, and the District benefits by being able to effectively manage the groundwater resources in Bell County with permittee engagement. The resulting operating permit is a unique, innovative, and progressive example of long-term permitting based on defined beneficial use and aquifer management.

**Mike Keester**, Hydrogeologist  
LRE Water, LLC



# *Appendix H*

## ***CUWCD 2018 Education and Outreach Events***

<b>Date</b>	<b>People</b>	<b>Event Information</b>	<b>Presentation</b>	<b>Booth</b>
1/24/18 – 1/25/18	200	Texas Ground Water Association Annual Convention		X
1/26/18	225	Texas A&M AgriLife Crops Conference		X
2/21/18	120	Saegert Elementary S.M.A.R.T. Day	X	X
3/1/18	70	Miller Heights Elementary Career Day	X	X
3/13/18	6	Boy Scouts Troop Conservation Presentation	X	X
4/3/18	90	East Ward Elementary Earth Day Event	X	X
4/6/18	95	Nolan Creek School Earth Day Event	X	X
4/9/18	58	Holland High School Aquatic & Environmental Science Classes	X	X
4/12/18	23	Central Texas College Agronomy Class	X	X
4/13/18	350	Month of the Military Child Earth Fest (Fort Hood)		X
4/20/18	250	Fort Hood Earth Day	X	X
4/23/18	40	Timber Ridge Elementary Earth Day Event	X	X
4/24/18	80	Providence Preparatory School	X	X
5/15/18	21	Harker Heights Kiwanis Meeting	X	
6/13/18	350	STEAM Day Event at Harker Heights Library	X	X
6/20/18	54	Harker Heights Library Science Camp	X	X
6/27/18	24	Harker Heights Library Science Camp	X	X
7/18/18	23	4-H STEAM Day at Saegert Elementary	X	X
7/24/18	30	4-H2O Youth Ambassadors	X	X
9/20/18	115	Conservation Expo		X
10/4/18	30	Temple Rotary Meeting	X	
10/6/18	350	Sirena Festival		X
11/7/18	65	V.G. Young Institute for County Government Conference	X	
11/15/18	158	18 <sup>th</sup> Annual Bell County Water Symposium	X	X
11/25/18	105	Harker Heights Elementary 5 <sup>th</sup> Grade	X	X
<b>Total reach</b>	<b>2,932</b>			

# *Appendix I*





# *Appendix J*

## Rainwater Harvesting



Rainwater harvesting is an innovative alternative water supply approach anyone can use. Rainwater harvesting captures, diverts, and stores rainwater for later use.

Implementing rainwater harvesting is beneficial because it reduces demand on existing water supply, and reduces run-off, erosion, and contamination of surface water.

Rainwater can be used for nearly any purpose that requires water. These include landscape use, stormwater control, wildlife and livestock watering, in-home use, and fire protection.

A rainwater harvesting system can range in size and complexity. All systems have basic components, which include a catchment surface, conveyance system, storage, distribution, and treatment.

For more information, please visit the [Texas A&M AgriLife Extension – Rainwater Harvesting website](#) and the [Texas Water Development](#)

[Board – Rainwater Harvesting website.](#)

### Related Resources



**Rainwater Harvesting Book:** Homeowners and landowners can construct systems to capture, store and use rainwater to water their landscape plants.



SEARCH CUWCD



# *Appendix K*



## Brush Control

Brush Busters is a cooperative program of the Texas AgriLife Research and Extension Service to expedite the adoption of Tactical Brush Management Systems (TBMS) technology.

Brush Busters methods are easily understood, even by those with little or no previous experience in brush control. We recommend only "select" treatments capable of killing at least 7 out of 10 of the plants treated. Brush Busters methods make every attempt to keep equipment costs and complexity to a minimum, and whenever possible, to use non-restricted herbicides. One-page pamphlets are available from most County Extension offices that describe, in a simple 3-step process, the Brush Busters control methods for mesquite, pricklypear and cedar. Videos are available for checkout through most County Extension offices that demonstrate the Brush Busters control methods. For those who are computer literate, a CD-ROM Brush Busters program is available that uses interactive video, audio and graphics to teach the use of Brush Buster methods for mesquite control.

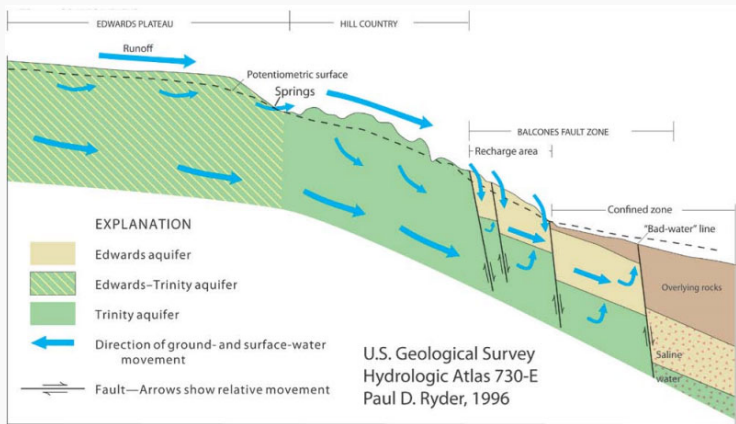
- **Cedar**
  - [Leaf Spray Method](#)
  - [Spot Spray Method](#)
  - [Top Removal Method](#)
  - [How to Estimate Costs for Controlling Small Cedar](#)
- **Cut Stumps**
  - [Cut Stump Spray for Hardwood Species](#)
  - [Cut Stump Spray for Redberry Cedar](#)
- **Huisache**
  - [Leaf Spray Method](#)
  - [Stem Spray Method](#)
- **Macartney Rose**
  - [Leaf Spray Method](#)
- **Mesquite**
  - [Leaf Spray Method](#)
  - [Stem Spray Method](#)
  - [How to Estimate Cost for Controlling Mesquite](#)
- **Pricklypear**
  - [Pad or Stem Spray Method](#)
  - [Top Removal Method](#)
  - [How to Estimate Costs for Controlling Pricklypear](#)
- **Saltcedar**
  - [Leaf Spray Method](#)
  - [Stem Spray Method](#)
- **Tallowtrees**
  - [Leaf Spray Method](#)
  - [Stem Spray Method](#)
- **Yucca**
  - [Herbicide + Oil Whorl Spray](#)
  - [Undiluted Whorl Spray](#)
- **Equipment**



SEARCH CUWCD

# *Appendix L*

## Recharge Enhancement



Recharge enhancement is an important tool to help encourage recharge of our groundwater. Urban development decreases direct recharge from precipitation but introduces new sources of water which, in most instances, can increase groundwater recharge if applied properly.

[Best Management Practices for Recharge Enhancement](#)

[Onion Creek Recharge Enhancement](#)



SEARCH CUWCD



# *Appendix M*



Clearwater UWCD - Edwards BFZ Monitor Wells

Staff measures wells quarterly in order to closely monitor the aquifer levels as part of our statutory responsibility. The Texas Water Development Board conducted some of the measurements, shown in red. The measurements in blue were taken by the Clearwater staff. The Texas Water Development Board provides information through publication of continuous monitoring data on the measurements of the TDDT wells and an additional well in Salado, shown in red.

Table with columns: State #, CUWCD #, Well Name, Highest, Lowest, and multiple measurement columns (e.g., 58-04-508, 58-04-510, 58-04-512, etc.). The table contains numerous rows of data points, some highlighted in red or blue, representing water level measurements over time for various wells.



Clearwater UWCD - Edwards BEZ Monitor Wells

Self measures wells quarterly in order to closely monitor the aquifer levels as part of our statutory responsibility. The Texas Water Development Board conducted some of the measurements, shown in red. The measurements in blue were taken by the Clearwater staff. The Texas Water Development Board provides information through publication of continuous monitoring data on the measurements of the TODD wells and an additional well in Salado, shown in red.

Table with columns: State #, CUWCD #, Well Name, Salado ISD, Salado WSC (#1), Salado WSC (#2), Salado WSC (#3), Salado WSC (#4), Salado WSC (#5), Salado WSC (#6), Salado WSC (#7), Salado WSC (#8), Salado WSC (#9), Salado WSC (#10), Salado WSC (#11), Salado WSC (#12), Salado WSC (#13), Salado WSC (#14), Salado WSC (#15), Salado WSC (#16), Salado WSC (#17), Salado WSC (#18), Salado WSC (#19), Salado WSC (#20), Salado WSC (#21), Salado WSC (#22), Salado WSC (#23), Salado WSC (#24), Salado WSC (#25), Salado WSC (#26), Salado WSC (#27), Salado WSC (#28), Salado WSC (#29), Salado WSC (#30), Salado WSC (#31), Salado WSC (#32), Salado WSC (#33), Salado WSC (#34), Salado WSC (#35), Salado WSC (#36), Salado WSC (#37), Salado WSC (#38), Salado WSC (#39), Salado WSC (#40), Salado WSC (#41), Salado WSC (#42), Salado WSC (#43), Salado WSC (#44), Salado WSC (#45), Salado WSC (#46), Salado WSC (#47), Salado WSC (#48), Salado WSC (#49), Salado WSC (#50).





## Clearwater UWCD - Upper Trinity Monitor Wells

Staff measures wells quarterly in order to closely monitor the aquifer levels as part of our statutory responsibility. The Texas Water Development Board conducted some of the measurements, shown in red. The measurements in blue were taken by the Clearwater staff. The Texas Water Development Board provides information through publication of continuous monitoring data on the measurements of the TxDOT wells and an additional well in Salado, shown in red.

State #	40-57-902	40-57-903	40-58-201	58-04-103	57-15-903		
CUWCD #	E-02-721G	E-02-722G	M-10-001P	E-16-052GU	M-17-CTGCD	Robinson	
Well Name	McCallum #1	McCallum #2	CTC	Fant	Robinson		
Highest	-131.20	-131.10	-77.83	-280.10	-4.93	0.00	0.00
Lowest	-172.60	-173.30	-87.59	-339.85	-64.19	0.00	0.00
2/24/1993 0:00				-301.70			
2/8/1994 0:00				-308.25			
1/26/1995 0:00				-280.10			
1/18/1996 0:00				-309.10			
1/14/1997 0:00				-302.44			
1/12/1998 0:00				-302.27			
1/13/1999 0:00				-297.20			
1/11/2000 0:00				-310.90			
1/12/2001 0:00				-312.70			
1/10/2002 0:00				-311.60			
1/29/2003 0:00				-310.80			
2/19/2004 0:00				-304.70			
1/14/2005 0:00				-311.60			
11/1/2006 0:00	-142.10	-142.50					
1/1/2007 0:00	-144.30	-144.20					
7/1/2007 0:00	-131.20	-131.10					
1/1/2008 0:00	-134.50	-134.40					
1/23/2008 0:00				-311.55			
7/1/2008 0:00	-151.80	-151.50					
1/1/2009 0:00	-145.40	-145.00					
2/3/2009 0:00				-339.85			
7/1/2009 0:00	-159.60	-159.50					
1/1/2010 0:00	-152.10	-152.00	-87.59		-7.38		
3/24/2010 0:00				-320.04			
7/1/2010 0:00	-150.60	-151.30	-77.83		-14.51		
1/1/2011 0:00	-149.70	-150.00	-79.64		-16.03		
2/25/2011 0:00				-326.12			
7/1/2011 0:00	-166.80	-165.70	-80.53		-16.42		
9/1/2011 0:00	-170.10	-170.90	-81.01		-28.97		
10/4/2011 0:00				-325.51			
11/1/2011 0:00	-163.80	-164.30	-80.28		-48.35		
1/1/2012 0:00	-156.50	-157.30	-79.72		-64.19		
5/1/2012 0:00	-156.40	-157.60	-78.99		-13.83		
10/9/2012 0:00				-332.23			
1/1/2013 0:00	-155.00	-157.30	-81.66		-16.64		
5/1/2013 0:00	-160.80	-161.30	-82.13		-16.34		
8/1/2013 0:00	-172.60	-173.30	-82.70		-15.16		
11/1/2013 0:00	-159.20	-160.00	-82.35		-13.11		
12/13/2013 0:00				-331.41			
2/1/2014 0:00	-156.80	-157.70	-82.68		-14.94		





## Clearwater UWCD - Upper Trinity Monitor Wells

Staff measures wells quarterly in order to closely monitor the aquifer levels as part of our statutory responsibility. The Texas Water Development Board conducted some of the measurements, shown in red. The measurements in blue were taken by the Clearwater staff. The Texas Water Development Board provides information through publication of continuous monitoring data on the measurements of the TxDOT wells and an additional well in Salado, shown in red.

State #	40-57-902	40-57-903	40-58-201	58-04-103	57-15-903		
CUWCD #	E-02-721G	E-02-722G	M-10-001P	E-16-052GU	M-17-CTGCD	Robinson	
Well Name	McCallum #1	McCallum #2	CTC	Fant	Robinson		
Highest	-131.20	-131.10	-77.83	-280.10	0.00	0.00	0.00
Lowest	-172.60	-173.30	-87.59	-339.85	0.00	0.00	0.00
5/1/2014 0:00	-163.00	-162.90	-83.07		-15.95		
8/1/2014 0:00	-169.70	-167.70	-83.56		-15.96		
11/1/2014 0:00	-165.10	-166.60	-83.42		-21.88		
1/1/2015 0:00	-157.60	-158.40	-83.54		-15.98		
6/1/2015 0:00	-153.20	-154.20	-83.92		-10.12		
9/14/2015 0:00	-167.90	-167.90	-83.48		-15.17		
11/30/2015 0:00	-155.50	-156.50	-82.72		-10.51		
1/1/2016 0:00					-4.93		
1/5/2016 0:00	-154.70	-155.60	-83.50				
4/19/2016 0:00	-155.03	-157.07	-83.82		-7.72		
6/1/2016 0:00					-8.28		
8/30/2016 0:00	-159.00	-162.50	-84.45				
10/3/2016 0:00			-84.30				
10/6/2016 0:00				-310.15			
10/19/2016 0:00			-84.25				
12/1/2016 0:00			-84.07				
12/6/2016 0:00			-83.91				
12/29/2016 0:00	-153.60	-153.79					
1/5/2017 0:00			-83.90				
2/6/2017 0:00			-83.92				
3/5/2017 0:00			-83.96				
3/6/2017 0:00							
3/30/2017 0:00	-154.10	-154.39	-84.00				
5/8/2017 0:00			-84.23				
6/4/2017 0:00			-84.21				
6/5/2017 0:00							
7/7/2017 0:00	-162.70	-162.90	-84.51				
8/9/2017 0:00			-83.28				
9/5/2017 0:00			-83.37				
10/2/2017 0:00	-160.90	-161.39	-83.30		-14.20		
10/2/2017 14:09							
11/6/2017 0:00			-83.29				
11/6/2017 14:13					-14.05		
12/4/2017 0:00			-83.20				
12/4/2017 14:13					-14.12		
12/27/2017 0:00	-156.70	-156.79	-83.31				
12/27/2017 14:14					-13.81		
2/5/2018 10:10							
3/5/2018 0:00					-13.86		
3/5/2018 12:00							



## Clearwater UWCD - Upper Trinity Monitor Wells

Staff measures wells quarterly in order to closely monitor the aquifer levels as part of our statutory responsibility. The Texas Water Development Board conducted some of the measurements, shown in red. The measurements in blue were taken by the Clearwater staff. The Texas Water Development Board provides information through publication of continuous monitoring data on the measurements of the TXDOT wells and an additional well in Salado, shown in red.

State #	40-57-902	40-57-903	40-58-201	58-04-103	57-15-903		
CUWCD #	E-02-721G	E-02-722G	M-10-001P	E-16-052GU	M-17-CTGCD	Robinson	
Well Name	McCallum #1	McCallum #2	CTC	Fant	Robinson		
Highest	-131.20	-131.10	-77.83	-280.10	-4.93	0.00	0.00
Lowest	-172.60	-173.30	-87.59	-339.85	-64.19	0.00	0.00
3/8/2018 12:00			-83.18		-13.98		
3/29/2018 0:00							
3/29/2018 12:00			-83.41				
5/7/2018 0:00					-13.54		
5/7/2018 12:00			-83.78				
5/7/2018 14:21			-83.99				
6/3/2018 20:00					-11.75		
6/4/2018 0:00							
6/4/2018 2:00							
6/21/2018 11:57		-162.70					
6/21/2018 12:00			-84.21				
6/22/2018 11:53	-162.60						
6/22/2018 15:27							
7/5/2018 0:00					-11.18		
8/6/2018 12:00			-84.54				
8/13/2018 12:00			-84.38				
9/3/2018 12:00			-84.46				
9/28/2018 12:00			-84.30				
9/28/2018 12:14	-165.70						
9/28/2018 12:17		-166.00					
11/5/2018 12:00			-83.46		-5.69		
12/3/2018 12:00			-83.64		-8.36		
12/26/2018 11:24							
12/26/2018 11:27		-157.39					
12/26/2018 12:00			-83.35				
12/31/2018 12:00					-8.77		
Since Last	8.60	8.61	0.29	21.26	-0.41		
Historic	-15.00	-14.89	4.24	-8.45	-1.39		

The desired future conditions established by Clearwater Underground Water Conservation District for the Upper Trinity

is no more than 155 feet of drawdown after 50 years.

**average drawdown goal per year is -3.1 feet.**

E-line Measurement		
Sonic Measurement		
TW/DB Measurement		
No Reading Available		

Minimum Number of Measurements: **3**

**Average Drawdown**

Drawdown of Water Level

Increase of Water Level

**-0.65 ft/yr**



Clearwater UWCD - Middle Trinity Monitor Wells

Staff measures wells quarterly in order to closely monitor the aquifer levels as part of our statutory responsibility. The data were developed to be considered as part of the community's groundwater. The measurements in blue were taken by the Clearwater staff. The Texas Water Development Board provides information through

Table with columns for Well Name, Agency, and various monitoring data points (e.g., 58-02-302, 58-02-303, etc.). The table contains numerous rows of data, with some cells highlighted in blue to indicate measurements taken by Clearwater staff.



Clearwater UWCD - Middle Trinity Monitor Wells

Staff measures wells quarterly in order to closely monitor the aquifer levels as part of our statutory responsibility. The data were developed by our staff and are provided for your information. The data were developed by our staff and are provided for your information. The data were developed by our staff and are provided for your information.

Table with 40 columns: Well Name, Station, Date, and various water level measurements (e.g., M-1-0015, M-1-0016, M-1-0017, etc.) with values in feet.



Clearwater UWCD - Middle Trinity Monitor Wells

Staff measures wells quarterly in order to closely monitor the aquifer wells as part of our statutory responsibility. The data were developed by our stationary monitoring system. The information is being presented in this report for the information of the public. The data were developed by our stationary monitoring system. The information is being presented in this report for the information of the public.

Table with columns for Well Name, Station ID, and various monitoring data points (e.g., M-1-1-001, M-1-1-002, etc.) across multiple rows.



Clearwater UWCD - Middle Trinity Monitor Wells

Staff measures wells quarterly in order to closely monitor the aquifer wells as part of our statutory responsibility. The data were developed by the contracted contractor of the measurements shown in red. The measurements in blue were taken by the Clearwater staff. The Texas Water Development Board provides information through...

Table with columns for Well Name, Agency, and various measurement dates (e.g., 8/27/2018, 9/27/2018, 10/27/2018). Rows include wells like 58-02-302, M-14-0015, 58-02-301, etc. Values are provided for each date, with some in red indicating contractor data and others in blue indicating staff data.

The desired future conditions established by Clearwater Underground Water Conservator District for the increase than 208 feet of drawdown after 50 years. The average drawdown per year is 4.24 feet.

E-tile Measurement  
Some Measurement  
No Reading Available

Minimum Number of Measurements: 3

Average Drawdown -5.22 ft/yr

Drawdown of (Water Level Increase of Water Level)

Drawdown of (Water Level Increase of Water Level)

Drawdown of (Water Level Increase of Water Level)

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### Clearwater UWCD - Lower Trinity Monitor Wells

Self measures wells quarterly in order to closely monitor the aquifer levels as part of our statutory responsibility. The Texas Water Development Board conducted some of the measurements, shown in red. The measurements in blue were taken by the Clearwater staff. The Texas Water Development Board provides information through publication of continuous monitoring data on the measurements of the TxDOT wells and an additional well in Salado, shown in red.

State #	40-53-406	40-54-701	40-61-509	40-62-401	40-62-501	40-62-502	58-05-102	58-06-301	40-57-602	None	58-06-201	40-53-405	None	40-35-404	
CUWCD #	N2-02-022G	M-13-006G	M-13-007G	N2-03-001G	M-13-008G	N2-02-024G	N2-02-010G	N2-04-010P	M-09-002P	N2-10-001P	N2-13-002P	M-13-039G	N2-14-004P	M-17-CTGCD	
Well Name	Moffatt WSC #1	Pea Ridge-City of Temple #2	Pea Ridge-City of Temple #3	Gen. TX Vet. Hospital	Acres-City of Temple #1	East Bell WSC #1	East Bell WSC #2	East Bell WSC #3	Copperas Cove - Lower	Armstrong WSC #2	Jack Hilliard Dozer and Materials	CUWCD-Tanglewood Monitor-Well	CTWSC Doc Curb	Carille	
Highrest	-329.70	-259.00	-31.00	-71.60	-136.13	-245.80	-36.00	-378.00	-290.13	-305.80	-173.40	-268.60	-452.84	-370.70	
Lowest	-495.50	-483.00	-285.25	-414.30	-363.60	-262.60	-274.52	-357.70	-298.46	-357.70	-191.41	-469.29	-461.46	-372.20	
5/4/2018 2:00															
6/4/2018 8:10	-495.50														
6/9/2018 8:17															
6/9/2018 8:50															
6/21/2018 12:00															
6/29/2018 12:00															
7/3/2018 9:17															
7/5/2018 9:18															
7/5/2018 11:04															
7/5/2018 12:00															
7/5/2018 13:05															
7/5/2018 13:30															
7/5/2018 14:00															
7/31/2018 12:00															
8/6/2018 0:00															
8/6/2018 12:00															
8/6/2018 14:52															
8/6/2018 18:00															
8/6/2018 18:00															
8/7/2018 9:15															
8/7/2018 9:16															
8/13/2018 12:00															
8/13/2018 12:00															
8/13/2018 12:00															
8/13/2018 12:00															
8/13/2018 12:52															
8/14/2018 12:08	-493.50														
9/10/2018 14:00															
9/11/2018 9:11															
9/11/2018 9:14															
9/27/2018 9:42															
9/27/2018 12:00															
9/27/2018 13:55															
9/27/2018 14:25															
9/27/2018 15:21															
9/28/2018 12:00															
9/28/2018 13:20															
10/2/2018 10:18															
10/4/2018 9:08															
10/4/2018 9:09															
10/29/2018 11:23															
10/29/2018 11:40															
10/29/2018 13:41															
10/31/2018 12:00															
11/5/2018 12:00															
11/5/2018 12:00															
11/5/2018 15:00															
12/3/2018 12:00															
12/3/2018 15:00															
12/4/2018 12:00															
12/6/2018 12:00															
12/6/2018 12:00															
12/7/2018 12:00															
12/7/2018 13:15															
12/27/2018 15:00															
12/31/2018 12:00															
12/31/2018 21:29															
Since Last	2.00	0.41	-1.80	-1.80	0.76	-1.90	-83.16	4.62	-0.52	10.00	0.22	1.66	8.62	-0.10	0.48
Historical	-160.80	-227.79	-341.30	-341.30	-226.71	-11.50	-224.52	-2.410	-7.30	-13.47	-17.79	-199.03	1.16	-0.51	-46.64
E-line Measurement															
Sonic Measurement															
TWDB Measurement															
Air line Measurement															
No Reading Available															

The desired future conditions established by Clearwater Underground Water Conservation District for the Lower Trinity is no more than 319 feet of drawdown after 50 years.

The average drawdown goal per year is -6.38 feet.

Minimum Number of Measurements: 3

Average Drawdown

Drawdown of Water Level  
Increase of Water Level

Drawdown of Water Level  
Increase of Water Level

# *Appendix N*

# 18th Annual Bell County Water Symposium

"Developing and Applying Scientific Discernment"

November 15, 2018

8:00 a.m. - 4:00 p.m.

Location: Texas A&M University - Central Texas, 1001 Leadership Place, Killeen

## AGENDA

**8:00 a.m. Registration**

**8:30 a.m. Welcome, Introduction & Theme of the Day**  
*Leland Gersbach, Board President, Clearwater UWCD*

**8:35 a.m. Clearwater UWCD: State of the District "Successes, Concerns and Actions"**  
*Leland Gersbach, Board President, Clearwater UWCD*  
*Dirk Aaron, General Manager, Clearwater UWCD*

**9:00 a.m. What is the Status & Future of the Trinity Aquifer?**  
**Regional Drawdown Impacting Rural Landowners.**  
*Mike Keester, P.G. LRE Water LLC, Round Rock, TX*

**9:30 a.m. Who & What Determines the Future of Williamson County Groundwater?**  
**Overview of the Texas Priority Groundwater Management Area Designations by TCEQ & TWDB**  
*Troupe Brewer, Attorney at Law, Lloyd Gosselink Rochelle & Townsend, P.C.*

**10:00 a.m. 15 Minute Break**

**10:15 a.m. What is Happening in the Brazos River Basin and BRA?**  
*Aaron Abel, BRA Water Services Manager, Brazos River Authority, Waco, TX*

**10:40 a.m. Texas Water Development Board Update (Science and Infrastructure)**  
*Larry French, P.G., Groundwater Division Director, Texas Water Development Board, Austin, TX*

**11:15 a.m. Keynote: Water For Texas, Sharing the Pool**  
*Dr. Charles Porter, Assistant Professor & Author, St. Edwards University, Austin, TX*

**12:00 - Lunch Welcome Address, Legislative Updates and Special Recognitions**

**1:00 p.m. Water Issues in Texas: Looking Forward by Looking Back at the Texas Legislature**  
**In the Courts: Developments in the Law Governing Groundwater Rights and Management**  
*Ty Embrey, Attorney at Law, Lloyd Gosselink Rochelle & Townsend, P. C.*  
*Mike Gershon, Attorney at Law, Lloyd Gosselink Rochelle & Townsend, P.C.*

**2:00 p.m. Collaboration for Discernment of the Lower Trinity Aquifer (30 Day Aquifer/Pump Test)**  
*Dr. Joe Yelderman, P.G. Professor of Geology, Baylor University, Waco, TX*  
*Bob Harden P.E., Harden Hydrology, Austin, TX*  
*Mike Keester, P.G. LRE Water LLC, Round Rock, TX*

**2:45 p.m. Texas 4-H2O Youth Ambassador Program Update**  
*David Smith, Texas AgriLife Extension Program Specialist, 4-H2O Program Coordinator, College Station, TX*  
*Luke Read & Kolby Dague, 4-H2O Ambassadors, Bell County*

**3:15 p.m. Rainwater Harvesting, "Future Alternative Today"**  
*Billy Kniffen, Retired Extension Agent & Retired State Specialist, Texas A&M AgriLife Extension Service*

### Evaluation

*Whitney Grantham, Bell County Extension Agent - Natural Resources, Texas A&M AgriLife Extension Service*

## ----- Symposium Sponsors -----

**Clearwater UWCD**  
**LRE Water LLC**  
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**Lloyd Gosselink Attorneys at Law**  
**Bell County Engineer's Office**  
**Texas A&M AgriLife Extension Service**

**Texas A&M University - Central Texas**

**For more information or to RSVP please contact Clearwater at 254-933-0120**